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*Varieties of*

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*Human Value*

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*To the young men and women in  
many parts of the earth  
who are the subject matter of this book*





## Preface

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The present study, begun in 1945, is in part the outgrowth of my earlier book *Paths of Life*, published in 1942. In that book's interpretation of religious attitudes and ethical systems past and present, three basic dimensions of value were postulated, and seven possible value patterns were analyzed in terms of those dimensions. The seventh of the patterns, or life-orientations, had never been manifested by a major social group, but it was felt that the pattern held promise for man's future. Such an analysis of patterned, dimensional human values seemed worthy of sustained and critical investigation.

The belief that a scientific study of values might also advance the enterprise of the humanities was in part related to the philosophical tradition of American pragmatism. Peirce, James, Dewey, Mead, and Lewis were major influences on my thinking, and they had all believed that evaluations were much like scientific judgments and (with some variations) that a scientific study of values and evaluations not only was possible but would be of service to man in his characteristic activity as valuer. It seemed desirable to put this philosophic position to a serious empirical test.

A third impulse to this investigation came from participation in the unity of science movement as represented by the *International Encyclopedia of Unified Science*. The most impressive results of the movement have been in mathematics, logic, and physics, as evidenced in the work of Russell, Carnap, and Reichenbach. Nothing of comparable significance has been done from this point of view in the socio-humanistic studies. It was the explicit belief of many within the movement that scientific method would be applicable to values also and that the results

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so obtained could be integrated with the recognized branches of empirical science. The present study may be regarded as an attempt to bring the socio-humanistic disciplines within the scope of the program of unified science.

Finally, I have been impressed by the way in which the special disciplines for the study of man are converging toward a general science of man, in turn part of a more general science of behavior. George H. Mead was a prophetic figure in this development, and my work with him in the middle 1920's convinced me that a prerequisite necessary to an adequate theory of human behavior would be the development of a scientific theory of signs and a scientific theory of value. My *Signs, Language, and Behavior*, published in 1946, was meant to contribute to the former development, and the present book is meant to contribute to the latter.

In the early 1940's there was not as much interest in the scientific study of signs and value as there is today; therefore I count it my good fortune to have interested Dr. David H. Stevens, then director of humanities of the Rockefeller Foundation, in my work. Without this interest and continued support, the study could not have been made.

During the same period I gained much stimulation from the work of Dr. William H. Sheldon. His *Varieties of Human Temperament* appeared in the same year as *Paths of Life*, in which the question was raised as to the relation of my threefold analysis to Sheldon's threefold analysis. The present book gives an occasion for such comparison.

My first acquaintance with the statistical techniques that proved increasingly important as the study developed was through discussions with Professor Louis L. Thurstone. Thurstone's concern with scaling techniques and factor analysis was motivated by his early interest in the problem of measuring values, and the techniques he evolved mark major advances in such measurement. In recent years Professor Lyle V. Jones, of the Psychometric Laboratory of the University of Chicago, has been of invaluable assistance in the final stage of this study by applying such statistical techniques to my data. The text will make clear the nature and extent of my indebtedness to him.

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His active collaboration is evident particularly in portions of chapters ii, iii, and v.

At certain stages of the statistical analysis Edris Bloomfield, Dr. Jack W. Brehm, Gerald Gratch, Laurence Kohlberg, William W. Rozeboom, Dr. Norman Martin, Dr. Donald N. Michael, and Dr. Karl-Erik Waerneryd have given valuable assistance, as have Professors William F. Dukes, Charles E. Osgood, S. S. Stevens, and George J. Suci. Ruth Herschberger did much work in the organization of the data. Naomi Shanan did a large part of the statistical computations, and her contribution has been a major one.

During 1951-53 I spent three semesters in the Department of Social Relations at Harvard, where my closest contacts were with Professors Talcott Parsons and Robert F. Bales. I have gained much from them, especially with respect to the relation of the personality and social systems. With Professor Clyde Kluckhohn I have exchanged ideas about values for many years. I am indebted also for discussions of special problems to Professors Gordon W. Allport, Jerome S. Bruner, Florence Kluckhohn, Frederick Mosteller, Henry A. Murray, John M. Roberts, and Samuel A. Stouffer. Since 1952 I have found stimulation in the Conference on the Unified Theory of Human Nature, directed by Dr. Roy R. Grinker. Association with its members and with the Harvard group accounts for the stress upon "system" in this work; it has also helped to expand and concretize my conception of the central role which symbols and symbolically sustained values play in the development, the difficulties, and the maintenance of the human person and human society. Both groups have stressed the importance of the multidisciplinary approach in the study of man. The present investigation is an illustration of what one encounters when one takes seriously the task of working with variables from a number of domains.

The collection of the data necessary for this study was made possible by the co-operation of many individuals. For the material collected in the United States I am indebted to the following professors, doctors, and students: Richard E. Alexander Archie J. Bahm, George R. Bartlett, James C. Bayton, William

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T. Burke, Irvin L. Child, Paul Crissman, Sylvanus Duvall, S. Morris Eames, Berkeley Eddins, Herbert Feigl, Marguerite Foster, Richard C. Gedney, Denton L. Geyer, John W. Hanson, Frank J. Holmes, Marten ten Hoor, Phyllis Wittman Huffman, Irving L. Janis, Abraham Kaplan, Nathan S. Kline, Alain L. Locke, Harry T. Lyon, Merritt H. Moore, Howard L. Parsons, Edward S. Robinson, Millard L. Rogers, Alexander Sesonske, Fred D. Sheffield, William H. Sheldon, Radoslav A. Tsanoff, Frank A. Weil, Elsa A. Whalley, and Carl E. Willgoose.

For material outside the United States I am indebted to Dr. Robert C. Angell of the Social Science Division of UNESCO, who secured the help of the Indian Ministry of Education and of Professor William D. Line of Toronto, Professor Rodger Ferguson of Glasgow, and Professor J. C. Flugel of London. The material from Japan was gathered by Professor Shunsuke Tsurumi with the help of Professor Michio Nagai. Professor Harald Ofstad was responsible for the Norwegian material. Professor Ferruccio Rossi-Landi secured material from Italy, and Professor Ernest Beaglehole from New Zealand.

The excellent body of Chinese data was obtained through the efforts of Professor Y. P. Mei during my trip to China in 1948. He secured the co-operation of many Chinese scholars and students throughout the country, and I remember their help with deep gratitude.

The material from India was gathered in part during my stay in India in 1949 and in part by the Indian Ministry of Education in 1949 and 1950. Among many others, I wish particularly to thank Professor B. L. Atreya, Miss D. M. Bearden, Professor Harimohan Bhattacharyya, Dr. N. N. Chatterji, Dr. A. S. Johnson, Swami Kailasananda, Professor P. C. Manuswamy, Professor Radhakamal Mookerji, Swami Nityaswarupananda, Professor Govind B. Pant, Professor R. N. Poduval, Professor Kali Prasad, Professor C. Kunham Raja, and Principal D. S. Sarma. I am especially grateful to Mr. Dharmendra K. Tyagi for his untiring service to me at Benares.

Principal Amir Hassan Siddiqi and Professor S. Mozaffer Husain made it possible to obtain data in Karachi, Pakistan. Dr. Chiranji Lal Sharma gave me aid on the Indian data. Mr.

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Siao-Fang Sun made some translations from the Chinese material. My wife, Ellen Morris, contributed much to the analysis of the data and the preparation of the final manuscript. Florence Field and Toni Palter did the major part of the final typing of the manuscript. On some problems connected with the framing of questionnaires I profited by conversations with Professor David Riesman. Professors Meyer Schapiro and Joshua C. Taylor aided in an analysis of the paintings to which I refer in chapter vii. I am indebted to Professor Robert C. Snider for the photograph facing page 148.

To all of these persons, and to others whose names I may have unintentionally omitted, I express my sincerest thanks.

The editors of the *American Journal of Psychiatry* and the *Journal of Abnormal and Social Psychology* have given permission to make some use of material that appeared in those journals. Raymond and Raymond, Inc., Artext Prints, Inc., and the Museum of Modern Art have been helpful in locating various prints.

There is a special place in my heart for the students and friends at the University of Chicago who in 1945 acted tirelessly as my first subjects and for the students in my classes at Harvard in 1951 and 1953 who let me worry them incessantly in the final stages of data gathering.

CHARLES MORRIS



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## *Instruments, Data, Values*

### 1. KEY DOCUMENT

In this study a document entitled "Ways To Live" occupies a central place. It lists thirteen conceptions of the good life, or, variously stated, thirteen possible "ways to live." These alternative conceptions differ widely in their content and include values advocated and defended in the several ethical and religious systems of mankind. Some notion of the range of variation of these alternatives may be imparted by a brief characterization of their diverse emphases:

- Way 1: preserve the best that man has attained
- Way 2: cultivate independence of persons and things
- Way 3: show sympathetic concern for others
- Way 4: experience festivity and solitude in alternation
- Way 5: act and enjoy life through group participation
- Way 6: constantly master changing conditions
- Way 7: integrate action, enjoyment, and contemplation
- Way 8: live with wholesome, carefree enjoyment
- Way 9: wait in quiet receptivity
- Way 10: control the self stoically
- Way 11: meditate on the inner life
- Way 12: chance adventuresome deeds
- Way 13: obey the cosmic purposes

The reactions of college students in various cultures to these thirteen Ways provide the basic data of this book. To get a feeling for "Ways To Live" as experienced by the students, it is desirable for the reader to work through the document (printed at the end of this chapter) as they did. Because of the primacy of "Ways To Live" in the investigation, it is advisable to consider at this point the history of the instrument.

## Varieties of Human Value

In my book *Paths of Life* an attempt was made to distinguish three basic components of the human personality, there labeled as "dionysian," "promethean," and "buddhistic." It was suggested that individuals differed in the relative strength of the components and that the differences expressed themselves culturally in various religions, ethical systems, types of art, and philosophies. The components were described as follows: "The dionysian component is made up of the tendencies to release and indulge existing desires. . . . The promethean component of personality is the sum of . . . active tendencies to manipulate and remake the world. . . . The buddhistic component of personality comprises those tendencies in the self to regulate itself by holding in check its desires." In terms of the relative order of strength of the components six main combinations are pos-

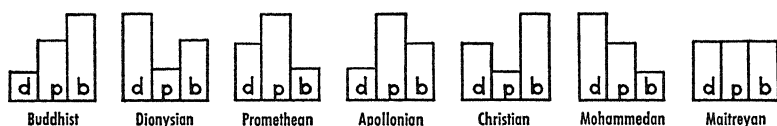


FIG. 1.—Seven value profiles. Here 'dionysian,' or *d*, refers to a value component, and 'Dionysian' refers to a way of life involving all three components in a certain order. A comparable explanation holds for *p* and *b*.

sible if the component strengths are unequal, and to these a seventh was added for consideration, namely, the case where all three components are moderately strong and approximately equal in strength. The seven possibilities were named and represented in profile form as shown in Figure 1.

Since the seven profiles have various degrees of similarity and difference, their relations could be indicated by representing profile difference as spatial distance in Figure 2. In this way was obtained a formal model in which variables on three dimensions were combined in certain ways to give a structured field of seven members. It was assumed that there was a correspondence between certain personality types and certain favored strategies for the conduct of life. These possibilities were explored in *Paths of Life* solely in terms of humanistic source material and solely for humanistic purposes.

It was nevertheless clear that the model could be used in

empirical investigations. Such investigation could test the factual assumptions underlying the humanistic analysis and might be of importance in the scientific study of human values. The "Ways To Live" document was developed as an instrument for such investigation.

The first seven of the Ways attempt to express the essentials of the seven alternative modes of life considered in *Paths of Life*.<sup>1</sup> These seven items (unnamed) were placed in a question-

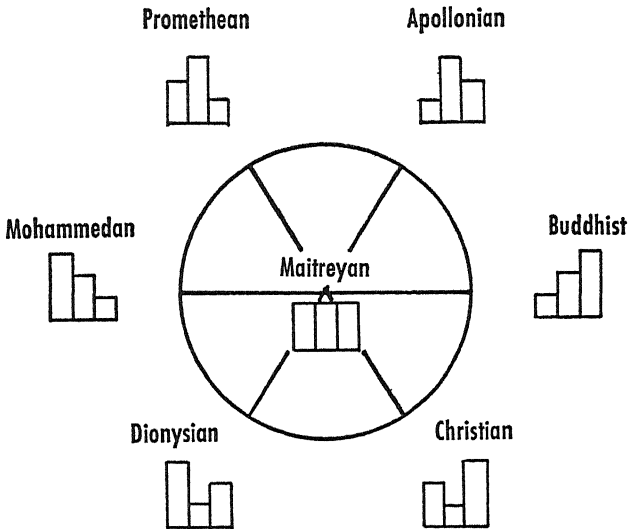


FIG. 2.—Structure of seven value profiles

naire before several hundred college students for rating and ranking. The instructions for rating were the same as those given in the version of the document printed at the end of this chapter. Because a considerable number of students found none of the seven alternatives much to their liking, the document was enlarged.

The respondents had from the first been asked to specify any other way of life that they would prefer to the seven Ways listed. On the basis of their reactions, together with a further consid-

1. Whether they do so adequately is another question. At least one formulation, discussed subsequently, is somewhat defective.

## *Varieties of Human Value*

eration of historically significant ethical and religious orientations, three more alternatives, Ways 8, 9, and 10, were added. For some years the ten-alternative document was used as the basis of study, and the suggestions for new alternatives decreased sharply.

When Ways 11, 12, and 13 were added, partly on the basis of student suggestions, partly in an attempt to include some obviously extreme alternatives, the number of suggestions for new alternatives further declined. The thirteen-alternative form of "Ways To Live" was then used as the key instrument in the present study. The English version was used in India, and translations in China, Japan, Italy, and Norway.

Very few of the respondents now succeeded in expressing plausible new alternatives.<sup>2</sup> Many of them paraphrased the content of their most favored alternative, many of them suggested additional nuances in the formulation of the document, and many of them stated a preference for some combination of the alternatives.

It may be noted that the thirteen alternatives were simply numbered and not named. There were several reasons for this, but the most important was the realization that the relation of the alternatives to historical religious and ethical systems was itself an empirical problem not to be prejudiced in advance. Some slight attention since given to this problem suggests that the major ethical and religious systems combine in certain ways various alternatives and should not simply be paired with one of them. The actual evidence at hand is slight but points in that direction.<sup>3</sup>

2. Among respondents in the United States, 14.0 per cent replied to the request for suggestions. The percentages for Norway, India, and China were 22.4, 28.0, and 11.0, respectively. That most students find some alternative much to their liking and some alternative much to their disliking is shown by the fact that 75.0 per cent of the students in the combined sample gave a rating of 7 to at least one Way and 64.8 per cent gave a rating of 1 to at least one Way. The percentages of those giving at least one 7 ranged from 88.0 in India to 63.2 in Japan. The percentages of those giving at least one 1 ranged from 79.1 in the United States to 51.2 in Japan.

3. Twenty-two students who had rated the Ways also rated the eight bodies of religious source material found in Robert O. Ballou's *The Bible of the World*. Product-moment correlations were computed between the ratings for every Way and every religion. The ratings of the Buddhist material had significant correlations with the

The thirteen alternatives are on the whole positive in tone, normal rather than abnormal, constructive rather than destructive, beneficent rather than malevolent. There are, of course, modes of life that are abnormal, destructive, and malevolent, and a study of them is important for the theory of value. No attempt was made in this study to include such modes of life. It is not certain, however, that they constitute a completely separate sector of the domain of value. It is possible that the "pathic" ways to live are special forms of the "healthy" ones rather than basically alternative. Thus Way 2, with its strong note of detachment, has served many a Buddhist well, but under certain circumstances it could degenerate into the pathological version of detachment illustrated by some forms of schizophrenia. Similarly, many others of the alternatives could take a pathic form.<sup>4</sup>

No careful investigation has been made of the repeat reliability of ratings of the document, but it is estimated to be of the order of .85 for college students. Ratings by twenty students had an average product-moment correlation of .87 with ratings made by them three weeks earlier. A retest made on thirty college students after a fourteen-week interval gave an average correlation of .78. Because during the interval the students had attended a course covering roughly the material of this book, it was to be expected that the correlation would be lower. Rank-order correlations made on the ratings of the first six Ways averaged .93 for fifty-six college women, the two sets of ratings being taken three weeks apart. The figure of .85, therefore, seems to be a reasonable estimate of the order of magnitude of the repeat reliability of the document for college students. The

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ratings of Ways 2, 9, and 11; for the Christian source material the same was true for Ways 3, 9, and 13, with a significant negative correlation to Way 4; for the Mohammedan source material the significant correlations were positive to Way 3 and negative to Ways 4 and 7; and so on. With a large enough number of subjects such comparisons would be of great interest, especially if material from the main ethical systems was included for rating; for they would allow the Ways to be analyzed in terms of the historic religious and ethical systems and the latter to be analyzed in terms of the Ways. In any case, it seems best not to give historical names to the thirteen alternatives which are the basis of this study, even though many analogies are evident.

4. See *The Open Self*, pp. 114-16, for some elaboration of this hypothesis.

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mean reliability of the Ways themselves is .67, based on twenty-one students tested over a three-week interval. Ways 1, 2, 4, 7, 9, 10, and 12 showed the highest reliability, and Ways 3, 8, and 13 the lowest.

There is, of course, no special significance in the limitation of the alternatives to thirteen. If, indeed, there are dimensions which define a "value space," there is no reason why there cannot be an infinite number of ways to live, each defined by a point in that space. It is merely believed that the thirteen alternatives, because of the considerations mentioned in the construction of the document, do represent a good sample of the regions in such a space, thus providing a valid instrument in the technical sense of the term. Additional material bearing upon this question of validity will appear in the course of the analysis.

### 2. THE RANGE OF DATA

While the ratings of "Ways To Live" furnish the main body of data to be considered, certain additional sources of information will be used. A number of subjects, though by no means all, rated colored reproductions of paintings. The paintings give a convenient source of non-verbal (though still symbolic) subject matter that can be compared with the verbalized material of the Ways instrument. Some subjects were asked to appraise the paintings as works of art in addition to expressing their own likes or dislikes. Some subjects were asked to rate the thirteen Ways in terms of how they believed they ought to live and how they believed they did in fact live—both in addition to the customary rating in terms of how they would like to live. Some use was also made of a short inventory of philosophic beliefs.

Interviews lasting thirty minutes to an hour were held with approximately 100 students in each of the main cultures sampled, China, India, and the United States. These interviews followed a set pattern, and careful notes were taken. They were planned to throw light upon the subject's main interests, the career that he or she expected to follow, and important events that had occurred in his or her life. The interviews also gave the subjects a chance to explain and defend their highest and lowest ratings. At the end of the interview a somatotype rating was



given according to Dr. W. H. Sheldon's criteria, and a brief description was made of the way the subject had reacted during the interview. On some subjects, temperament data were secured by the use of the *Thurstone Temperament Schedule* and, in a few cases, by the *Cattell 16 Factor Personality Test*. Sheldon himself somatotyped 253 of the male subjects by his photographic technique.

From the questions appended to "Ways To Live" information was secured on the sex, age, height, and weight of the respondent; on physical disabilities; on where the person spent his childhood and the population of that place; on the economic status of his parents; and on the respondent's view as to whether the culture of which he is a member is satisfactory for the development and expression of his own particular abilities and wishes.

In summary, the data under analysis consist, on the one hand, of ratings of ways to live and paintings by college students in a number of cultures and, on the other hand, of information about these students gained from temperament tests, classifications of physique, interview material, and questionnaires. The problem is the relation of the two sets of data, one valuative and the other descriptive.

### 3. THE RANGE OF SAMPLES

The best and most extensive samples are from the United States, China, and India, and they accordingly receive most attention in the analysis.

In the United States 2,015 completed copies of the final version of "Ways To Live" were secured from college men and 831 copies from college women. The largest samples were from the universities of Tennessee, Florida, Minnesota, California (at Los Angeles), Kansas, Alabama; and from Yale University, Howard University, and Knox College. Smaller samples were obtained from the universities of Denver, California (at Berkeley), Chicago, Wyoming, New Mexico; and from Harvard University, Princeton University, Syracuse University, the New School for Social Research, Chicago Teachers College, Rice Institute, and George Williams College.

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In the majority of cases the material was collected by members of a philosophy department, though in some instances it was collected by persons in psychology, the social sciences, and physical education. An endeavor was made, especially in the larger samples, to get data from classes that contained students from all parts of the college or university, but this was not controlled in any systematic manner. While no discernible difference appears in the more carefully selected samples as contrasted to those not selected with this sampling problem in mind, it may be that the total sample is somewhat biased in the direction of students in the humanities, psychology, and social sciences as over against those in the natural sciences and the professions.

In most cases students were asked but not required to answer the document. In some large classes the return of the document was made a class requirement, but no difference was detected between voluntary and involuntary samples. Respondents in the great majority of cases were asked not to sign their names.

While sampling procedures might well have been more systematic, the range of areas covered and the number of cases in the total sample give ground for the belief that the United States material is a good sample of undergraduate students in the state universities and the larger private schools and universities. It is believed that the India and China samples are adequate also.

The Chinese material was collected in the fall of 1948, when most of China was still in the hands of the Nationalists, and it was possible to get material from students in the main university centers. "Ways To Live" documents were obtained from 523 men and 220 women. About 38 per cent of these came from the Peking area, and the other samples covered the main geographical regions of China except Manchuria. Of the total eleven samples, eight were from universities, two from teachers colleges, and one from a secondary school.

The Indian material was gathered in 1949 and 1950, a portion by myself mainly from Benares Hindu University, Lucknow University, and the Isabella Thoburn College of Lucknow, but some from Madras University and Vivekananda College of Madras. Thus this material was weighted toward northern

India. The material furnished by the Indian Ministry of Education was heavily weighted toward south India. Among samples from twenty institutions, a few of them not at the university level, Bengal, west India, and Kashmir were poorly represented. The total sample included 724 men and 410 women.

Of the other samples, those from Japan, Norway, and Canada are the largest, totaling, respectively, 192, 149, and 170 men and 115, 75, and 144 women. The material was gathered at the universities of Tokyo and Kyoto, the University of Oslo, and the University of Toronto. The remaining material, from Pakistan, England, New Zealand, and Italy, is too scanty for systematic use but is of interest at several points.

It is obvious that there are large cultural gaps. The original plan of collecting material from twenty national groups was never achieved for one reason or another despite serious attempts. Projects under way in Burma, Lebanon, and West Germany were terminated because of political happenings or conditions. It was not possible to awaken interest in South American countries, although four attempts were made to do so. Efforts to get material from France, Switzerland, Australia, and Ceylon obtained nothing. With Continental Europe, the Arabic-speaking world, Spanish America, and Russia unrepresented, the range of cultures sampled is much less than one would wish. Nevertheless, there remains the opportunity of comparing material from three Western and three Asiatic nations, and of studying in detail the material from students in China, India, and the United States, where the samples were largest.

It is hoped that the methods used and the results gained in this analysis will stimulate similar studies of cultures here neglected and thus in some degree fulfil the original plan and purpose of this investigation.

#### 4. THREE ASPECTS OF VALUE

The term 'value' is one of the Great Words, and, like other such words ('science', 'religion', 'art', 'morality', 'philosophy'), its meaning is multiple and complex. It is not necessary for our

## *Varieties of Human Value*

present purposes to attempt to define it, in the strict sense of giving the sufficient and necessary conditions for the application of the term. We must distinguish, however, three ways in which the term is commonly employed in order to be clear as to the sense in which the data collected for this study give us knowledge of human values.

At times the term 'value' is employed to refer to the tendencies or dispositions of living beings to prefer one kind of object rather than another. ('Object' in this connection signifies whatever can be preferred to something else; physical things, persons, colors, emotions, images, thoughts, symbols, forms of physical activity, can all be objects in this sense.) Thus if a person is shown pairs of paintings one after another and is asked to select in each pair the painting he likes best, it may turn out that the selected paintings have in common a number of features which differentiate them from the rejected paintings. On this basis it may be said, for instance, that the person values paintings with contrasting colors, vigorous action, and open spaces, and the hypothesis may be hazarded that he in general values contrasts, strength, and spaciousness. Reference to "value" in such cases is simply a way of referring to the actual direction of preferential behavior toward one kind of object rather than another.<sup>5</sup> Such values may be called *operative values*.

In contrast to this employment, the term 'value' is often restricted to those cases of preferential behavior directed by "an anticipation or foresight of the outcome" of such behavior.<sup>6</sup> Thus a drug addict may repeatedly take a certain drug and yet firmly believe that it is preferable not to be a drug addict. He

5. Preferential behavior is what Dewey has called "selective-rejective behavior" ("The Field of 'Value,'" in *Value: A Cooperative Inquiry*, ed. Ray Lepley [1949], pp. 64 ff.). It might perhaps be identified with Murray and Morgan's positive and negative "conative trends" ("A Clinical Study of Sentiments," *Genetic Psychology Monographs*, XXXII [1945], 13).

6. Dewey, *op. cit.*, p. 68. Compare: "Value is more than mere preference; it is limited to those types of preferential behavior based upon conceptions of the desirable" (Clyde Kluckhohn *et al.*, "Values and Value-Orientations in the Theory of Action," in *Toward a General Theory of Action*, ed. T. Parsons and E. A. Shils [1951], p. 422). For R. B. Perry a central feature of interest, and so of value, is "the *moving or prepotent* expectation" (*Realms of Value* [1954], p. 40).

anticipates the outcome of not using drugs, in virtue of this anticipation approves the state of not being an addict, and conceives this as desirable or preferable. In contrast to operative values, such values may be called *conceived values*.

A conceived value thus involves preference for a symbolically indicated object.<sup>7</sup> The problem of the relation of conceived values to operative values is a phase of the problem of the relation of behavior controlled by symbols to behavior not so controlled. As abstract possibilities, one can imagine an extreme case where every conceived value issued into an operative value and another extreme case where no conceived value influenced the system of operative values. But human beings seldom, if ever, find themselves at either extreme; some interaction and some incompatibility between conceived and operative values is the common state. For this reason those who adopt the second explication of the term 'value' usually include in their formulation the requirement that values must influence to some degree the course of action.<sup>8</sup>

A third employment of the term 'value' is concerned with what is preferable (or "desirable") regardless of whether it is in fact preferred or conceived as preferable. Thus a person with diabetes seeks advice from a dietitian as to the preferable diet for diabetics and for himself in particular. He may himself have a conception of such a preferable diet, but he realizes that he may be wrong about this. The diet that the dietitian judges to be preferable may not coincide with the foods preferred by either the diabetic or the dietitian, and the judgment of the dietitian may itself be mistaken. Value here is not characterized in terms of what is in fact preferred but in terms of what in fact is preferable if the patient prefers to live rather than to die. Since

7. Some persons might prefer to say "conceptually indicated object" in order not to prejudice the question of the relation of thoughts to sign processes. If this is done, the notion of "conceived value" has much in common with the notion of positive and negative "intellective trends" of Murray and Morgan (*op. cit.*, p. 13).

8. This is true of Dewey, Perry, and Kluckhohn. Thus Kluckhohn and his collaborators give this definition of value: "A value is a conception, explicit or implicit, distinctive of an individual or characteristic of a group, of the desirable which influences the selection from available modes, means, and ends of action" (*op. cit.*, p. 395).

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the stress is upon the properties of the object, such values may be called *object values*.<sup>9</sup>

The question of the relation of these three common usages of the term 'value' is a problem in the general theory of value, and an adequate discussion of the issue would take us too far afield. But it may be remarked that all three usages have been explicated with respect to some form of the term 'prefer': value as the preferred, value as a conception of the preferable, value as the preferable. The main contrast is between preferred and preferable (desired and desirable, valued and valuable, esteemed and estimable). What is preferred (operative values) can be found through a study of preferential behavior. What is conceived to be preferable (conceived values) can be studied through the symbols employed in preferential behavior and the preferential behavior directed toward symbols. If, then, it could be shown that while the preferable is not identical with the preferred (the "ought" not identical with the "is") it still cannot be defined without relation to preference, then all three usages of the term 'value' would have in common a reference to preferential behavior. Preferential behavior would then define the value field, and the various employments of the term 'value' would be explicated not as referring to different entities (different "values") but as delineating different aspects of the value field. To the extent that this could be done, axiology (the theory of value) would, as the science of preferential behavior, become part of the general science of behavior. Whether or not the theory of value can be so conceived is not under direct consideration in this study. But it is believed that the results of the investigation lend it support.<sup>10</sup>

9. One could speak of "objective values," but this might suggest that such values can be defined or studied in complete independence from preferential behavior, a view not implied in the above description. On the topic of "value in objects," see especially C. I. Lewis, *An Analysis of Knowledge and Valuation*, chap. xvii.

10. See "Axiology as the Science of Preferential Behavior," in Lepley, *op. cit.*, pp. 211-22; and "Criticisms" and "Rejoinders," *ibid.*, pp. 388-95, 428-33, 437-39. If there are widespread significant employments of the term 'value' which do not under analysis involve reference to preferential behavior, then the conception of axiology in this article is too narrow. R. B. Perry's analysis throws some doubt upon the existence of such alternative employments (*General Theory of Value*, chap. ii).

## 5. VALUES AND THE PRESENT INVESTIGATION

The preceding remarks raise a question concerning the present investigation. In the examination of ratings of various possible ways to live and various paintings, in what sense are we studying values? The answer seems to be that the ratings of the "Ways To Live" document, if made according to its instructions, give information primarily about values in the second sense of the term, i.e., about conceived values. Since this study concerns primarily the ratings of the document, it is primarily, though not exclusively, a study of one kind of conceived value, i.e., a study of conceptions of the good life.

A doubt may arise on this point from the fact that in rating the Ways a respondent expresses a preference for certain alternatives among others, and it may be wondered whether this is any different from choosing among, say, various foods and hence whether it is not simply valuing in the sense of operative value. It is, of course, true that one may prefer certain symbol combinations to others just as one prefers certain foods to others. But in the present instance the symbol combinations are themselves formulated approvals of one mode of life rather than another; therefore to like one symbolically formulated alternative more than another is to like one conception of the good life more than another. The ratings may therefore be regarded as indications of conceived values of the respondents.

There is still another qualification to be made. Strictly speaking, the respondent in his ratings merely says that he likes each alternative to a certain degree. He may, of course, lie about this, or he may reply as he thinks it is wise to reply in case his identity is known or might become known, or he may put down ratings without even reading the document. All such actions undoubtedly do at times occur. But the size and consistency of, say, the United States sample and the fact that for the most part the replies are voluntary and unsigned make serious worries on this point seem out of place. Nevertheless, in strictness it must be recognized that the primary data gained from the document are statements in which the respondents say that they like various conceptions of the good life to various degrees.

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Such knowledge of how persons say they would like to live does not in itself tell us how they do live, or whether they would really like to live the way they profess if they actually tried it out, or whether it would in fact be preferable for them or for society if they did live the way they say they would like to live. But knowledge of professed conceptions of the good life is certainly a central aspect of any serious study of human values, and without it some of these other questions can be neither raised nor answered.

It will be recalled that some students were asked to rate "Ways To Live" not only in terms of how they would like to live but also in terms of how they do live and how they think they ought to live, and to rate paintings not only in terms of how much they liked them but also in terms of how good they are as works of art. These new kinds of ratings permit some investigation of the terms 'good' and 'ought' and show how, among other ways, operative and object values may be brought within this approach to the study of human values.

In concluding this chapter it may be noted that the thirteen Ways are fragments or aspects of what are variously called "world views," "philosophies of life," or "value-orientations."<sup>11</sup> The Ways do not for the most part give reasons for adopting the mode of life that they advocate. A person who favors one of these alternatives or some combination of them is normally prepared to justify his choice by statements about himself, about the nature of man, about man's place in the cosmos, and about the cosmos itself. Hence it becomes possible to explore the relation of conceptions of the good life to the wider belief-systems in which these conceptions are embedded and in terms of which they are defended. Something will be said about this in a later chapter, but the wide horizon which here unfolds is for the most part beyond the scope of the present investigation.

11. Kluckhohn and his collaborators define a value-orientation in the following terms: "A value-orientation" is "a generalized and organized conception, influencing behavior, of nature, of man's place in it, of man's relation to man, and of the desirable and undesirable as they may relate to man-environment and interhuman relations" (*op. cit.*, p. 411).



## 6. THE QUESTIONNAIRE

Within this investigation, indeed at the core of it, is the "Ways To Live" document, which is reproduced here as it was distributed to the students. Again, it is suggested that the reader work through the questionnaire.

### WAYS TO LIVE

*Instructions:* Below are described thirteen ways to live which various persons at various times have advocated and followed.

Indicate by numbers which you are to write in the margin how much you yourself like or dislike each of them. Do them in order. Do not read ahead.

Remember that it is not a question of what kind of life you now lead, or the kind of life you think it prudent to live in our society, or the kind of life you think good for other persons, *but simply the kind of life you personally would like to live.*

Use the following scale of numbers, placing one of them in the margin alongside each of the ways to live:

- 7 I like it *very much*
- 6 I like it *quite a lot*
- 5 I like it *slightly*
- 4 I am *indifferent* to it
- 3 I dislike it *slightly*
- 2 I dislike it *quite a lot*
- 1 I dislike it *very much*

WAY 1: In this "design for living" the individual actively participates in the social life of his community, not to change it primarily, but to understand, appreciate, and preserve the best that man has attained. Excessive desires should be avoided and moderation sought. One wants the good things of life but in an orderly way. Life is to have clarity, balance, refinement, control. Vulgarity, great enthusiasm, irrational behavior, impatience, indulgence are to be avoided. Friendship is to be esteemed but not easy intimacy with many people. Life is to have discipline, intelligibility, good manners, predictability. Social changes are to be made slowly and carefully, so that what has been achieved in human culture is not lost. The individual should be active physically and socially, but not in a hectic or radical way. Restraint and intelligence should give order to an active life.

WAY 2: The individual should for the most part "go it alone," assuring himself of privacy in living quarters, having much time to himself, attempting to control his own life. One should stress self-sufficiency, reflection and meditation, knowledge of himself. The direction of interest should be away from intimate associations with social groups, and away from the physical manipulation of objects or attempts at control of the physical environment.

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One should aim to simplify one's external life, to moderate those desires whose satisfaction is dependent upon physical and social forces outside of oneself, and to concentrate attention upon the refinement, clarification, and self-direction of oneself. Not much can be done or is to be gained by "living outwardly." One must avoid dependence upon persons or things; the center of life should be found within oneself.

WAY 3: This way of life makes central the sympathetic concern for other persons. Affection should be the main thing in life, affection that is free from all traces of the imposition of oneself upon others or of using others for one's own purposes. Greed in possessions, emphasis on sexual passion, the search for power over persons and things, excessive emphasis upon intellect, and undue concern for oneself are to be avoided. For these things hinder the sympathetic love among persons which alone gives significance to life. If we are aggressive we block our receptivity to the personal forces upon which we are dependent for genuine personal growth. One should accordingly purify oneself, restrain one's self-assertiveness, and become receptive, appreciative, and helpful with respect to other persons.

WAY 4: Life is something to be enjoyed—sensuously enjoyed, enjoyed with relish and abandonment. The aim in life should not be to control the course of the world or society or the lives of others, but to be open and receptive to things and persons, and to delight in them. Life is more a festival than a workshop or a school for moral discipline. To let oneself go, to let things and persons affect oneself, is more important than to do—or to do good. Such enjoyment, however, requires that one be self-centered enough to be keenly aware of what is happening and free for new happenings. So one should avoid entanglements, should not be too dependent on particular people or things, should not be self-sacrificing; one should be alone a lot, should have time for meditation and awareness of oneself. Solitude and sociality together are both necessary in the good life.

WAY 5: A person should not hold on to himself, withdraw from people, keep aloof and self-centered. Rather merge oneself with a social group, enjoy cooperation and companionship, join with others in resolute activity for the realization of common goals. Persons are social and persons are active; life should merge energetic group activity and cooperative group enjoyment. Meditation, restraint, concern for one's self-sufficiency, abstract intellectuality, solitude, stress on one's possessions all cut the roots which bind persons together. One should live outwardly with gusto, enjoying the good things of life, working with others to secure the things which make possible a pleasant and energetic social life. Those who oppose this ideal are not to be dealt with too tenderly. Life can't be too fastidious.

WAY 6: Life continuously tends to stagnate, to become "comfortable," to become sicklied o'er with the pale cast of thought. Against these tendencies, a person must stress the need of constant activity—physical action, adventure, the realistic solution of specific problems as they appear, the improvement of techniques for controlling the world and society. Man's future

depends primarily on what he does, not on what he feels or on his speculations. New problems constantly arise and always will arise. Improvements must always be made if man is to progress. We can't just follow the past or dream of what the future might be. We have to work resolutely and continually if control is to be gained over the forces which threaten us. Man should rely on technical advances made possible by scientific knowledge. He should find his goal in the solution of his problems. The good is the enemy of the better.

WAY 7: We should at various times and in various ways accept something from all other paths of life, but give no one our exclusive allegiance. At one moment one of them is the more appropriate; at another moment another is the most appropriate. Life should contain enjoyment and action and contemplation in about equal amounts. When either is carried to extremes we lose something important for our life. So we must cultivate flexibility, admit diversity in ourselves, accept the tension which this diversity produces, find a place for detachment in the midst of enjoyment and activity. The goal of life is found in the dynamic integration of enjoyment, action, and contemplation, and so in the dynamic interaction of the various paths of life. One should use all of them in building a life, and no one alone.

WAY 8: Enjoyment should be the keynote of life. Not the hectic search for intense and exciting pleasures, but the enjoyment of the simple and easily obtainable pleasures: the pleasures of just existing, of savory food, of comfortable surroundings, of talking with friends, of rest and relaxation. A home that is warm and comfortable, chairs and a bed that are soft, a kitchen well stocked with food, a door open to the entrance of friends—this is the place to live. Body at ease, relaxed, calm in its movements, not hurried, breath slow, willing to nod and to rest, grateful to the world that is its food—so should the body be. Driving ambition and the fanaticism of ascetic ideals are the signs of discontented people who have lost the capacity to float in the stream of simple, carefree, wholesome enjoyment.

WAY 9: Receptivity should be the keynote of life. The good things of life come of their own accord, and come unsought. They cannot be found by resolute action. They cannot be found in the indulgence of the sensuous desires of the body. They cannot be gathered by participation in the turmoil of social life. They cannot be given to others by attempts to be helpful. They cannot be garnered by hard thinking. Rather do they come unsought when the bars of the self are down. When the self has ceased to make demands and waits in quiet receptivity, it becomes open to the powers which nourish it and work through it; and sustained by these powers it knows joy and peace. To sit alone under the trees and the sky, open to nature's voices, calm and receptive, then can the wisdom from without come within.

WAY 10: Self-control should be the keynote of life. Not the easy self-control which retreats from the world, but the vigilant, stern, manly control of a self which lives in the world, and knows the strength of the world and the limits of human power. The good life is rationally directed and holds

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firm to high ideals. It is not bent by the seductive voices of comfort and desire. It does not expect social utopias. It is distrustful of final victories. Too much cannot be expected. Yet one can with vigilance hold firm the reins to his self, control his unruly impulses, understand his place in the world, guide his actions by reason, maintain his self-reliant independence. And in this way, though he finally perish, man can keep his human dignity and respect, and die with cosmic good manners.

WAY 11: The contemplative life is the good life. The external world is no fit habitat for man. It is too big, too cold, too pressing. Rather it is the life turned inward that is rewarding. The rich internal world of ideals, of sensitive feelings, of reverie, of self-knowledge is man's true home. By the cultivation of the self within, man alone becomes human. Only then does there arise deep sympathy with all that lives, an understanding of the suffering inherent in life, a realization of the futility of aggressive action, the attainment of contemplative joy. Conceit then falls away and austerity is dissolved. In giving up the world one finds the larger and finer sea of the inner self.

WAY 12: The use of the body's energy is the secret of a rewarding life. The hands need material to make into something: lumber and stone for building, food to harvest, clay to mold. The muscles are alive to joy only in action, in climbing, running, skiing and the like. Life finds its zest in overcoming, dominating, conquering some obstacle. It is the active deed which is satisfying, the deed adequate to the present, the daring and adventuresome deed. Not in cautious foresight, not in relaxed ease does life attain completion. Outward energetic action, the excitement of power in the tangible present—this is the way to live.

WAY 13: A person should let himself be used. Used by other persons in their growth, used by the great objective purposes in the universe which silently and irresistibly achieve their goal. For persons and the world's purposes are dependable at heart, and can be trusted. One should be humble, constant, faithful, uninsistent. Grateful for the affection and protection which one needs, but undemanding. Close to persons and to nature, and secure because close. Nourishing the good by devotion and sustained by the good because of devotion. One should be a serene, confident, quiet vessel and instrument of the great dependable powers which move to their fulfillment.

*Instructions for ranking your preferences:* Rank the thirteen ways to live in the order you prefer them, putting first the number of the way to live you like the best, then the number of the way you like next best, and so on down to the number of the way to live you like the least:

*Final Word:* . . . If you can formulate a way to live you would like better than any of the thirteen alternatives, please do so. . . .

Sex.....Age.....Height.....Weight.....

If you have any physical disability, please describe it:

## *Instruments, Data, Values*

Where was your father born?

Where was your mother born?

To what religious group, if any, did your parents belong?

In what place did you spend your childhood?

The population of the above place was

over 500,000....

between 100,000 and 500,000....

between 25,000 and 100,000....

less than 25,000....

To what income group did your parents belong in the community in which they lived?

upper income group....

upper middle income group....

middle middle income group....

lower middle income group....

lower income group....

Do you feel that our society is satisfactory for the development and expression of your own particular abilities and wishes? Why or why not?

## *Value Scales and Dimensions*

### 1. THE RATING CATEGORIES

The fact that the figures 7 to 1 are used in rating the Ways, paintings, and other items does not assure that they are numerals upon which mathematical operations can be performed. As far as the instructions go, '7' is simply a synonym for 'like very much' and '1' a synonym for 'dislike very much.' Such figures are seven response categories applied in various ways by different persons to various objects; and they may be no more than that.

The fact that most subjects rank the various items in an order which corresponds to their ratings is evidence that for most persons the seven response categories form an ordinal scale.<sup>1</sup> But it does not follow that it is an interval scale in which the difference between any two adjacent categories (say '7' and '6') is the same as the difference between two other adjacent categories (say '3' and '2'). And even if the intervals were the same, the scale need not be a ratio scale, i.e., a scale with a non-arbitrary zero point so that one could say, for instance, that an item which has the average rating of 5.00 is liked twice as much as an item which has an average rating of 2.50. Finally, it cannot be assumed that subjects in different cultures use the same rating scale in the same way, and as long as this is in doubt, comparisons between cultures in terms of the ratings are suspect.

It turns out, fortunately, that for at least the cultures central to this inquiry the seven response categories, as defined in the "Ways To Live" instrument, can be handled for many purposes

1. In a very few cases the lowest rank is given to Ways rated as 4.

as ordinary integers and without respect to cultural source. But prior to a consideration of the steps leading to this conclusion, several transitional points may be made.

Important results can, of course, be obtained without the use of interval scales. One can do much simply with the rank orders given to the Ways. Rank-order correlations are available, and a study can be made of particular ranks. In the preliminary stages of this work extensive calculations were made with the subjects' first choices. It is possible and revealing to compare cultures and groups in cultures with respect to the numbers or percentages of first choices given to the various Ways. Simple statistical techniques are available for testing the the significance of differences found from such comparisons.

First choices, however, have certain limitations, mainly because to rely upon them exclusively is to use only a small fraction of the data available. If they faithfully reflected the total body of data, this would be unobjectionable, but they do not. It is true that in the large samples there is a noticeable relation between percentages of first choices for the Ways and their mean ratings, but this relation is not very close and changes considerably from sample to sample. The differences between the cultures expressed in terms of first choices vary considerably from the differences determined by the means. Each is legitimate and each may reveal distinct information; but since the means make use of all the ratings, it is not advisable to consider the first choices alone. And if means are to be used in this study, it must be shown either that the seven response categories that constitute the ratings form an equal interval scale or that their positions on an interval scale can be determined.

## 2. ATTAINMENT OF AN INTERVAL SCALE

Statistical techniques for the scaling problem exist, and they were first applied to 250 ratings of the Ways made by college men in the United States. Here only the main results need be considered, for the methods used have been described elsewhere.<sup>2</sup> The intervals between the original seven response cate-

2. Charles Morris and Lyle V. Jones, "Value Scales and Dimensions," *Journal of Abnormal and Social Psychology*, LI (1955), 523-35. Professor Jones did the scaling analysis with the assistance of Dr. Karl-Erik Waerneryd.

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gories proved not to be equal but to show the commonly found lengthening of intervals toward the ends of the scale. The interval between the upper boundaries of categories '1' and '2' was found to be .71; between those of '2' and '3' to be .49; between '3' and '4' to be .43; between '4' and '5' to be .66; between '5' and '6' to be .83. The method used did not permit the determination of the lower boundary of the first response category or the upper boundary of the last response category.<sup>3</sup>

It was also found that the scales obtained from the Norwegian, Japanese, Chinese, and Indian ratings were similar enough to the United States scale to justify forming a common scale by averaging the results of the five separate analyses. Ex-

TABLE 1  
SUCCESSIVE INTERVAL SCALE VALUES OF  
UPPER CATEGORY LIMITS

SCALE	N	RATING CATEGORY					
		1	2	3	4	5	6
U.S.....	252	-1.417	-.709	-.216	.216	.872	1.701
India.....	724	-1.151	-.606	-.213	.213	.818	1.562
Japan.....	192	-1.284	-.752	-.266	.266	.803	1.574
China.....	523	-1.356	-.687	-.233	.233	.854	1.628
Norway.....	149	-1.477	-.732	-.220	.220	.718	1.730
Common.....	.....	-1.337	-.697	-.230	.230	.813	1.639

pressed cumulatively and as positive or negative upon the convention that the middle point of the original response category 4 is the zero point, the five national scales and the common scale are shown in Table 1.

The resulting scale is an interval scale in that a given interval (say of .25) denotes the same psychological "distance" regardless of its position on the scale. Although the original seven rating categories are not equal in interval, they correspond to numerals in that a place can be assigned to them on the interval

3. Since the above analysis was made, I have done a similar analysis on the ratings of 1,546 college men. The figures for the corresponding intervals are .68, .48, .41, .65, and .81. The average difference in interval length in the two analyses is .02. In each case the interval length is smaller for the more comprehensive sample, indicating slightly less homogeneity among the members of the larger group.



scale. This can be done from the data in Table 1 for five of the categories, and the numerical value of all seven categories could be determined by other methods.<sup>4</sup> If, then, the original ratings of the Ways were replaced by these corrected numerical values, they could be subjected to all mathematical calculations appropriate to an interval scale. The computing of product-moment correlations, means, and standard deviations is thus justified. In a genuine sense values are then being measured,<sup>5</sup> and the measurements can be made across the cultures from which the scale was derived as well as within the cultures.

On the not unreasonable assumption that the midpoint of the original category 4 ("I am indifferent to it") is the zero point of the scale, ratio comparisons can be made with respect to this assumed zero point. If this point does indeed represent zero value, then the scale is a ratio scale, and measurement of value in the full sense of the term is possible. Whether the assumed zero value is the true one has not been investigated in this analysis.<sup>6</sup>

### 3. SCALE VALUES OF THE THIRTEEN WAYS

It is now possible to find the position (or scale value) of each of the Ways on the common scale.<sup>7</sup> These scale values are numerical expressions of the amount of liking of a given Way in a given culture. Forming one of the bases for the cross-cultural comparisons in the next chapter, they are represented in Table 2.

### 4. THE D STATISTIC

Before considering the relation between the use of the original ratings and the use of the derived interval scale, it is appropriate to introduce a device employed in later chapters. This is a method for measuring the distance (or the difference)—hence-

4. J. P. Guilford, *Psychometric Methods* (2d ed.), pp. 237-41.

5. For a discussion of this point see H. Gulliksen, "Paired Comparison and the Logic of Measurement," *Psychological Review*, LIII (1946), 199-213.

6. If value were identified in terms of preferential behavior, it would be possible to regard complete absence of preference (complete indifference) as the absolute zero of value. This would seem to be possible for object values as well as for operative and conceived values.

7. For the method by which this is done see Morris and Jones, *op. cit.*

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forth to be called *D*—between two patterns, whether the patterns compared are those of individuals, cultures, or groups within cultures, and regardless of the type of item rated. The method is simply that of computing the distance between any two points in a space of *N* orthogonal dimensions; it is in effect a generalization of the Pythagorean theorem.<sup>8</sup>

Thus to calculate the *D* between the United States and India in terms of the data in Table 2, one would proceed as follows: find the difference between the scale values given to each Way

TABLE 2  
SCALE VALUES OF THE WAYS TO LIVE

Way	U.S.	India	Japan	China	Norway	Sum	Av.
1.....	.80	1.36	.70	.59	.83	4.28	.86
2.....	— .78	.08	.09	— .67	— .25	—1.53	— .31
3.....	.18	.91	.87	.72	.96	3.64	.73
4.....	— .26	— .21	— .18	— .49	— .55	—1.69	— .34
5.....	.20	.54	.44	.75	— .07	1.86	.37
6.....	.47	.93	.65	.85	.62	3.52	.70
7.....	1.24	.46	.21	.51	.66	3.08	.61
8.....	.26	.19	— .22	.03	— .02	.24	.05
9.....	— .60	— .33	.03	— .87	— .25	—2.02	— .40
10.....	— .09	.98	.46	— .22	.24	1.37	.27
11.....	— .71	— .15	— .10	— .91	— .70	—2.57	— .51
12.....	.33	.39	.04	.35	.22	1.33	.27
13.....	—1.17	.06	— .52	.92	— .56	—1.27	— .25
Sum.	— .13	5.21	2.47	1.56	1.13	10.24	.....
Av...	— .01	.40	.19	.12	.09	.....	.158

for the United States and India, square each of these differences, add the results, take the square root of this sum. The result ( $\sqrt{\sum d^2}$ ) is the *D* in question.

In this procedure the Ways are regarded as thirteen dimensions, and the United States and India become points in the thirteen-dimensional space, their location being determined by the thirteen scale values. *D* is then the distance between the points in the thirteen-dimensional space.

The legitimacy of this procedure in a given case depends upon

8. See Charles E. Osgood and George J. Suci, "A Measure of Relation Determined by Both Mean Difference and Profile Information," *Psychological Bulletin*, XLIX (1952), 251-62. P. C. Mahalanobis had in 1936 developed a generalized distance statistic.

whether certain underlying assumptions are fulfilled: it is assumed that the dimensions are independent and that the same interval scale holds for all of them. The assumptions are not strictly fulfilled by the Ways, for regarded as dimensions, complete independence would require that there be no correlations between the ratings of the Ways. This is, of course, not the case, but since (in terms of absolute values) the average correlation is .10 and the highest correlation is .28, the Ways do not seriously violate the first requirement. Nor is the second requirement seriously violated. The intervals for the response categories are not identical for all of the Ways, but the range of deviation from the average is not great. The average of such deviations is .07 in the India analysis and .09 in the United States analysis.

The calculation of D's on the ratings of "Ways To Live" has this merit: the D's so calculated are quantitatively comparable provided sample sizes are comparable.<sup>9</sup> We can in principle determine whether the difference between two cultures is or is not as great as the differences between economic classes in the cultures, or between persons of various temperaments in the cultures, and so on. The results would be comparable, since the same instrument is used in each comparison. Even ratio comparisons would be possible, for D can have a zero value. Because the samples that are used differ widely in size, comparison of D's must be done with caution. Nevertheless, differences in D's are suggestive often enough to merit reference throughout this study.

## 5. JUSTIFICATION OF THE USE OF THE ORIGINAL RATINGS

Methodologically it would be best not to work from the original ratings but to replace each such rating by its numerical value on the derived interval scale. However, many of the calculations in the investigation had been made before the scaling analysis was done, and the problem arose whether it was actually necessary to start again. It happens that for many purposes little is sacrificed if the original rating categories are treated as ordinary integers. That this is so is somewhat sur-

9. With different sample sizes the D's may be corrected to make them comparable.

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prising, since we have seen that the interval lengths between them are not in fact equal.

The derivation of the scale values of the Ways was based on the uncorrected ratings as given by the student respondents. The preliminary scaling analysis made no assumption of equal intervals in the original ratings because it is an empirical problem to find out what in fact the intervals are. Once these intervals are determined, it is possible to investigate what would happen should the original ratings be used as if they marked equal scale intervals. It turns out that the results are practically the same: the correlation between the scale values of upper category limits on the common scale and the original ratings interpreted as integers is .995.<sup>10</sup> Hence the use of the original ratings for correlations is justified.

It might seem that the differences in using original ratings and corrected ratings would be greater in the determination of means. It is certainly true that one cannot say that every pair of equal differences of two means as determined from the original ratings are really equal, since ratings in one area of the original scale have different intervals than ratings in another area. This is especially true for the extremes of the scale when compared to the central intervals. The extreme ratings are, however, the least used, with the result that the mean of none of the Ways goes below 2.00 or above 6.00 in these five samples. This may in part account for the fact that there is a high correlation between the means of the Ways, computed from the original ratings, and their scale values. The rank-order correlations of means and scale values for the United States, China, India, Norway, and Japan average .985, and the corresponding product-moment correlations for China and India (the highest and lowest in rank-order correlations) are respectively .998 and .999.<sup>11</sup>

Finally, a similar situation obtains with respect to the com-

10. Throughout this study, 'correlation' signifies "product-moment correlation" unless some other type of correlation is specified.

11. There is considerable difference, however, between standard deviations calculated on the basis of the original ratings and those calculated on the basis of the derived scale.

putation of D's. The correlation of the ten D's for the five cultures just mentioned, calculated on the basis of ordinary means of the thirteen Ways, and the ten D's for the same cultures, calculated on the basis of the scale values of these Ways, is .989. The numerical values of these D's are set forth in the next chapter.

In terms of these considerations, evidently for many purposes it is legitimate to use the original rating categories as if they were integers. This important result could not be known in advance of the scaling analysis. Since, however, the scaling analysis has been made and since it will be necessary as the scientific study of values progresses to employ the most refined methods possible, we make use of the scaling results in this chapter and add the use of means derived from the original ratings only in later chapters of the book.

## 6. THE PROBLEM OF VALUE DIMENSIONS

We now turn to the second major problem of this chapter: the isolation of primary dimensions in the domain of value here under study. It has already been suggested that for some purposes each of the Ways might be regarded as a dimension, and the domain they represent be interpreted as a value space of thirteen dimensions. But another level of analysis is possible. It is evident that some of the Ways have features in common. If these features could be isolated, they would constitute common dimensions. Such common dimensions would simplify and clarify the structure of value space.

As mentioned in chapter i, *Paths of Life* was organized around the notion of three personality components, dionysian, promethean, buddhistic, which in various kinds of combination gave rise to different kinds of personalities and corresponding value patterns. In a later book, *The Open Self*, another set of names was used for related but not identical categories: dependence, dominance, and detachment were there regarded as basic components of human valuing.<sup>12</sup> Dependence was charac-

12. At the time I was not aware of a difference in the two sets of categories. It now seems that "dionysian" is the reverse of "detachment," "promethean" the reverse of "dependence," and "buddhistic" the reverse of "dominance." These relations are discussed in the final chapter.

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terized as a need "for easy compliance with the world. . . . The person depends, hangs on the physical and social world, is receptive to it, belongs to it, does not retreat from it or attempt to make it over, wishes sustenance, wishes a dependable world." Dominance was put in terms of "the need to be dominant in a situation (which is not necessarily to need to be domineering). Not a dependable world but a controllable world, a world in which effort is efficacious, a world in which one can initiate changes and lead them to a desired eventuation. The need is for power over persons and things, the excitement of overcoming, the sense of domination." Of detachment it was said: "It is a movement away from excessive external stimulation, away from a demanding pushing world. A movement toward the inner man. Not comfort is wanted, not power, but awareness of oneself. Not involvement in the world, but the world at a safe distance. That one may listen to the self, protect the self, savor the self, live with heightened consciousness."

It was felt at the time that the categories of dependence, dominance, and detachment were related to Sheldon's three temperament categories of viscerotonia, somatotonia, and cerebrotonia. It was also thought that they were similar in many respects to basic categories of Freud, Erich Fromm, Karen Horney, and the ancient Hindu psychologists.

In an attempt to objectify and clarify the situation still further, fourteen students were asked in 1953 to rate the thirteen Ways in terms of three unnamed categories whose content was indicated by the following words or phrases:

Category I	Category II	Category III
receptive	active control of en-	detached
responsive	vironment	restrained
relaxed	ability to dominate	self-controlled
emotional warmth	"making things happen"	self-aware
"letting things happen"	stress on doing	"watching things happen"
stress on being		stress on perceiving

The judges were asked to indicate the extent to which each of the Ways stressed attitudes expressed in Categories I, II, and III. Seven numerals were used: 7 = very much, 6 = quite a lot, 5 = a moderate amount, 4 = an average amount, 3 = less than

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average, 2 = a small amount, 1 = very little. The responses were averaged to get a score for each Way on each Category. At a later time the process was repeated with fifteen more students. The correlation for the scores assigned by the two groups was .98 on category I, .97 for Category II, and .98 for Category III. The scores for the combined group of twenty-nine judges are shown in Table 3.

These results suggest which Ways have which content in common. It will be noted, however, that the rank order of Ways

TABLE 3  
RANK ORDER OF WAYS IN TERMS OF CATEGORIES I, II, AND III\*

Way	I	Way	II	Way	III
8.....	(6.59)	12.....	(6.93)	2.....	(6.28)
9.....	(6.45)	6.....	(6.83)	11.....	(6.14)
13.....	(6.17)	5.....	(5.93)	10.....	(5.79)
3.....	(6.17)	10.....	(4.38)	1.....	(5.69)
4.....	(5.93)	7.....	(4.31)	7.....	(4.55)
7.....	(4.93)	1.....	(3.66)	4.....	(3.93)
11.....	(4.28)	4.....	(2.76)	9.....	(3.62)
1.....	(3.38)	2.....	(2.28)	3.....	(3.38)
5.....	(3.38)	3.....	(1.69)	8.....	(2.82)
2.....	(2.76)	13.....	(1.45)	13.....	(2.55)
10.....	(1.72)	8.....	(1.38)	6.....	(2.14)
12.....	(1.69)	11.....	(1.38)	12.....	(1.45)
6.....	(1.66)	9.....	(1.14)	5.....	(1.34)
Sum.....	55.11		44.12		49.68
Av.....	4.24		3.39		3.82

\* Twenty-nine judges.

with respect to Category I is almost the reverse of the order with respect to Category II. This indicates that one of the Categories, as defined in the instructions to the judges, is not a sharply defined alternative. Since the order by Category II seems to fit well the idea of dominance, it would seem that the difficulty lay in Category I, which had meant to approximate the idea of dependence but was apparently made too passive in the instructions to the judges. Nevertheless, a certain objectification had been reached in this process, for a step had been taken toward isolating the common dimensions in terms of the content of the Ways themselves as analyzed by a group of judges.

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### 7. A PHYSICAL MODEL

The next step was suggested by Osgood and Suci's paper on "A Measure of Relation Determined by Both Mean Difference and Profile Information." D's were calculated between every pair of Ways from the ratings of thirty-six students (seventeen men and nineteen women). This gave a total of seventy-eight D's, one for each pair of Ways. Strips from a bamboo table mat were cut to match these seventy-eight numbers, and cork balls were used to represent the Ways. Two corks were connected by a strip that represented the D of the corresponding Ways. A third cork, representing a third Way, was connected to the first two corks at the proper distance from each of them. The process was continued with considerable excitement, for the odds were against the supposition that the model could be constructed in three-dimensional space. As the construction was continued, small errors had to be allowed to make a fit possible, and these grew larger as the number of cork balls increased. But no gross forcings had to be made, and the model could be completed.<sup>13</sup>

The fact that a physical model could be built from the empirical data indicated that at least three primary dimensions were involved in the data. The error in the model did not completely eliminate the possibility that there were only three dimensions involved, though it rendered this unlikely. Since the error was not large, it seemed likely that if there were more than three dimensions, there were not many more.

The physical model gave no sure indication as to what the dimensions were or the relations of their axes, but it gave some clues. Ways 5, 6, and 12 formed a cluster, and these were the Ways the judges had ranked highest in Category II ("dominance"). Across the model from them in one direction was a cluster composed of Ways 2, 10, and 11, and these Ways had been ranked highest by the judges in Category III ("detachment"). In another direction, but not so clearly separated from the first two groups as they were from each other, was the group of Ways 4, 8, 9, 13, all of which had been rated high in Category I ("dependence"). A second model was made from the ratings

13. A photograph of the model, facing page 148.



in terms of the Categories, and from this it was visually evident that the two models had a similar structure. From the construction and comparison of the two models it seemed that at least three (and probably not many more) common value dimensions were involved in the ratings of the Ways and that these dimensions were at least roughly the same in content as the contents of the Categories, as shown by the ordering of the Ways according to the Categories by two groups of judges.

## 8. RECOURSE TO FACTOR ANALYSIS

It had been realized for some time that the technique of factor analysis had much to contribute to the problem of dimensionality. A statistician who had agreed to do the work was finally unable to do so, and this delayed the use of the method for several years. But in 1953 Professor Lyle V. Jones offered to undertake the task, and all of the factor analyses reported in this study were made by him.

A factor analysis aims to determine the smallest number of factors (dimensions) that will account for the intercorrelations among a number of variables. Two types of solution are provided: orthogonal and oblique. An orthogonal solution leads to independent dimensions (non-correlated factors); an oblique solution does not impose the condition of independence upon the dimensions (i.e., permits correlated factors).<sup>14</sup>

In the present case the variables are the Ways. The correlation matrix upon which the analysis is made is composed of the 78 correlations between the ratings of pairs of Ways. The analysis assigns a numerical value (called a factor loading) on each Way for each of the factors (dimensions) which the analysis uncovers. The common dimensions so uncovered, together with the factor loadings, permit the reproduction of the original 78 correlations between the ratings of the Ways.

The data upon which the basic orthogonal analysis was made came from the ratings of the Ways by 250 male college students,

14. For an introductory account of factor analysis see Guilford, *op. cit.*, chap. xvi. The major work on the methods used in the present study is L. L. Thurstone's *Multiple-Factor Analysis*. In the present analyses, a centroid solution was followed by orthogonal rotation to simple structure.

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drawn randomly from the entire United States sample but limited to ages 21 and 22.<sup>15</sup> The analysis shows that five independent factors (dimensions) are present. The figures opposite the Ways give the numerical strength (the factor loading) of each factor on each Way, as exhibited in Table 4.

The content of the factors is determined positively from the content of those Ways which have high positive factor loadings and negatively by those Ways which have high negative factor loadings. In the following interpretations factor loadings of .25

TABLE 4  
UNITED STATES ROTATED FACTORS

Way	A	B	C	D	E
1.....	.51	-.03	-.05	.02	-.02
2.....	.10	-.28	.50	-.11	.20
3.....	.25	.01	-.05	.34	-.03
4.....	-.44	.12	.10	-.11	.38
5.....	-.04	.34	-.36	.20	.07
6.....	.17	.30	-.18	-.06	.02
7.....	-.07	-.19	.02	-.18	.20
8.....	-.12	.02	-.08	.09	.44
9.....	-.03	-.09	.26	.47	.19
10.....	.41	.14	.22	.09	-.25
11.....	-.10	-.17	.54	-.02	-.02
12.....	.04	.58	.00	-.01	.01
13.....	.07	.02	.15	.51	-.27

or above and  $-.25$  or below will be taken into account. Factor loadings in the neighborhood of .00 do not indicate that the given Way is low in the given factor, but that the content of the Way and the content of the factor have little or nothing in common. For convenience of reference each factor is named, but the name is only suggestive of the factor content and is not a definition of it.

*Factor A: Social Restraint and Self-Control.*—The high positive factor loadings are on Ways 1 and 10, and the high nega-

15. This is a different sample from that reported in "Value Scales and Dimensions," which was neither randomly selected nor controlled for age. Hence the factors, and the factor scores used in chap. iii, differ in some respects from those reported in that article. The correlation matrix and centroid factor matrix of the present analysis will be found in an article by Lyle V. Jones and the author, "Relations of Temperament to the Choice of Values," to appear in the *Journal of Abnormal and Social Psychology*, late 1956 or early 1957.

tive loading is on Way 4. Way 3 has a positive secondary loading.

The stress is upon responsible, conscientious, intelligent participation in human affairs. The orientation is primarily moral. There is awareness of the larger human and cosmic setting in which the individual lives and an acceptance of the restraints which responsibility to this larger whole requires. The accent is upon the appreciation and conservation of what man has attained rather than upon the initiation of change. The antithesis of the trait is unrestrained and socially irresponsible enjoyment.

*Factor B: Enjoyment and Progress in Action.*—Ways 12, 5, and 6 give the positive content of this factor, and Way 2 gives its negative characteristics.

The stress is upon delight in vigorous action for the overcoming of obstacles. The emphasis is upon the initiation of change rather than upon the preservation of what has already been attained. The temper is one of confidence in man's powers rather than one of caution and restraint. The orientation is outward to society and to nature. The antithesis of the trait is a life focused upon the development of the inner self.

*Factor C: Withdrawal and Self-Sufficiency.*—The high positive factor loadings are upon Ways 11 and 2, and the high negative loading is on Way 5. There is a secondary positive loading on Way 9, but it is relatively small.

The stress is upon a rich inner life of heightened self-awareness. The self rather than society is the focus of attention. The emphasis is not one of self-indulgence, however, but is rather upon the simplification and purification of the self in order to attain a high level of insight and awareness. Control over persons and things is repudiated, but not deep sympathy for all living things. The antithesis of the trait is mergence of the self with the social group for group achievement and enjoyment.

*Factor D: Receptivity and Sympathetic Concern.*—This factor is characterized essentially in terms of the contents of Ways 13 and 9, with a secondary loading on Way 3.

The stress is upon receptivity to persons and to nature. The source of inspiration comes from outside the self, and the person lives and develops in devoted responsiveness to this source.

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Since there are only two high positive and no high negative loadings on this factor, Factor D is not as sharply defined by the Ways as are the other factors. But a stress upon responsive and devoted receptivity is clearly a mode of orientation different from that represented by any other factor.

*Factor E: Self-Indulgence (or Sensuous Enjoyment).*—This factor is defined positively in terms of the content of Ways 8 and 4 and negatively in terms of the content of Ways 10 and 13.<sup>16</sup>

The stress is upon sensuous enjoyment, whether this enjoyment be found in the simple pleasures of life or in abandonment to the moment. The emphasis upon social restraint and self-control characteristic of Factor A is rejected. The antithesis of the trait is responsible submission of one's self to social and cosmic purposes.<sup>17</sup>

### 9. INDIA AND CHINA ANALYSES

Orthogonal factor analyses were also made from the ratings of the Ways by 250 male students in India and by 250 male students in China. The factors and the factor loadings obtained in these analyses are shown in Tables 5 and 6.

The India analysis gave results very much like those of the United States analysis. The same five factors appear. There are of course some differences, especially in the Ways given negative loadings on some of the factors. With respect to the positive loadings, Way 2 plays a secondary role in Factor A' instead

16. The term 'self-indulgence' is not very satisfactory but is used because it appeared in the original report. 'Sensuous enjoyment' is here added as an alternative term.

17. Some further evidence for the validity of "Ways To Live" (at least with respect to the traditional religions) was gained in a factor analysis made on twenty-two subjects who rated both the Ways and the eight bodies of religious source material contained in Robert O. Ballou's *The Bible of the World*. The analysis was made on the basis of the ratings of seven Ways (Ways 2, 3, 4, 5, 9, 10, and 12) and the ratings of the religions (Buddhism, Christianity, Judaism, Confucianism, Mohammedanism, Taoism, Hinduism, and Zoroastrianism). Four factors were extracted, with recognizable similarity to the factors already presented, and all of the religions had a high factor loading on one or more of the factors. No religion had a high factor loading on Factor B (enjoyment and progress through action). The highest communalities were for Christianity and Zoroastrianism, and the lowest for Judaism and Hinduism. Since the number of subjects was so small, nothing is to be gained by giving the detailed results.

of Way 3. And Factor D' is identified by Ways 13 and 3 instead of by Ways 13, 9, and 3 as in the United States analysis. The differences, however, are on the whole very slight, and to all intents and purposes the two analyses reveal the same factor structure.

TABLE 5  
INDIA ROTATED FACTORS

Way	A'	B'	C'	D'	E'
1.....	.40	.01	.06	.09	.15
2.....	.28	-.28	.43	.12	.11
3.....	.14	.05	.22	.25	-.26
4.....	-.32	.12	.01	-.03	.53
5.....	-.15	.52	-.09	.23	.17
6.....	.19	.46	-.02	.01	-.05
7.....	-.11	.09	.22	-.23	-.17
8.....	-.25	-.02	.08	-.12	.28
9.....	-.02	-.24	.49	.01	-.07
10.....	.42	-.01	.24	.24	-.17
11.....	.15	-.29	.54	.02	-.18
12.....	.04	.52	.15	.15	.02
13.....	.00	-.04	.09	.52	-.07

TABLE 6  
CHINA ROTATED FACTORS

Way	A''	B <sub>1</sub> ''	B <sub>2</sub> ''	C''	E''
1.....	.45	-.04	-.25	-.25	.16
2.....	.47	-.34	-.02	.34	.02
3.....	.15	.43	.11	.14	-.14
4.....	.00	-.17	.05	.08	.42
5.....	-.03	.69	.01	-.21	-.01
6.....	-.07	.35	.45	.01	-.20
7.....	.15	.11	-.01	-.01	.47
8.....	.00	-.11	-.10	.04	.57
9.....	.20	-.03	-.07	.45	.28
10.....	.43	.16	.15	.14	-.27
11.....	-.01	.00	.06	.53	.05
12.....	.06	.07	.54	-.19	-.01
13.....	.26	-.02	.34	.01	-.05

The analysis of the Chinese data gives results similar to the United States and India analyses, though at first this may not seem to be the case. Factor D'' does not appear, and what was Factor B on the United States analysis splits into two related but distinguishable factors, B<sub>1</sub>'' and B<sub>2</sub>''.

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Factor D (or D') would probably not have appeared in either the United States or the India analysis except for Way 13, since there is no other high loading of this factor on any other Way in the India analysis, and only one such loading in the United States analysis (Way 9). In checking the Chinese translation of Way 13 several Chinese scholars agreed that it made Way 13 much more active and much less receptive than did the English version. Thus the opening sentence had become, "A person should make himself useful," rather than, "A person should let himself be used." The result is that Way 13 was placed by the Chinese students with Ways 6 and 12 on Factor B<sub>2</sub>' instead of being grouped with Way 9 or 3. Hence Factor D'' does not appear in the China analysis.

The split of the content of Factor B into two factors, B<sub>1</sub>' and B<sub>2</sub>', is of interest. The high loadings on Factor B<sub>1</sub>' are for Ways 5, 3, and 6, while the high loadings on Factor B<sub>2</sub>' are for Ways 12, 6, and 13. Way 6 is common to both factors. The essential difference between them is that while the United States and Indian ratings put Ways 5 and 12 on the same factor, the Chinese ratings separate them. It will be noted that Way 5, together with the presence of Way 3, gives Factor B<sub>1</sub>' an orientation toward specific problems of persons and society that is lacking in Factor B<sub>2</sub>', which is dominated by Way 12. (We will return to the significance of this distinction in the next section.) Factors B<sub>1</sub>' and B<sub>2</sub>' both stress activity and are obviously related to Factors B and B'. Factors A'', C'', and E'' are clearly analogues of the corresponding United States and India factors.

The similarity in the results of the three analyses is of considerable theoretical importance. For it shows that in spite of large differences in the acceptance and rejection of the various Ways in the three cultural samples (as shown by the scale values in Table 2) the ratings are along essentially the same common value dimensions. There is thus revealed an underlying value structure (or value space) which is very much the same in the three culturally diverse groups of students.

This result is evidence for the view that the value dimensions which have been isolated by the factor analyses are genuine common dimensions. It was seen earlier in the chapter that the

rating scales of the three groups were very similar. Now we see that the basic common dimensions underlying the ratings of the Ways are also very similar. With the establishment of a cross-cultural scale of measurement and cross-cultural dimensions on which measurements can be made, the basic requirements for a scientific study of this domain of human values are met.

10. THE STATUS OF DEPENDENCE, DOMINANCE,  
AND DETACHMENT

We are now in a position to consider the relation of the three categories of dependence, dominance, and detachment, which were operative in the earlier stages of this study, to the factors isolated by the factor analyses. The United States factors are taken as the primary basis of comparison.

If we consider the ratings of the Ways in terms of Categories I, II, and III (Table 3) as roughly indicating the contents of the categories of dependence, dominance, and detachment, then it is evident that there are similarities between these categories and some of the factors. Factor B (enjoyment and progress in action) has very much in common with dominance, and Factor C (withdrawal and self-sufficiency) has considerable in common with detachment. Factor D (receptivity and sympathetic concern) has some similarity to dependence. In all three cases the correlations of the factor loadings with the judges' scores are significant, but just barely so in the case of Factor D.<sup>18</sup> Factors A (social restraint and self-control) and E (self-indulgence), however, do not match closely any of the Categories. It might seem, therefore, that the factor analysis confirmed the earlier supposition of three primary value dimensions but has uncovered two more, or three more if the China analysis is taken into account.

This is indeed one way to look at the situation, and it has certain merits. It would simplify terminology by identifying

18. The correlations are respectively .84, .74, and .58. Way 7 was omitted from the computations. It is given a more than average rating by the judges on Categories I, II, and III, but has near zero factor loadings on Factors B, C, and D. There is no inconsistency here; since Way 7 has very low correlations with the other Ways, the factor loadings are low. All the other Ways appear in the three highest loadings of one or more of the five factors.

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dependence, dominance, and detachment with Factors D, B, and C, and it would give an operational definition of the terms, since their content would be determined by the content of the Ways with high factor loadings on those factors. It may be that this would be the wisest course to take. Because, however, this interpretation would be forcing the barely significant relation of dependence and Factor D and because it would neglect the high agreement between two groups of judges on the assignment of ratings in terms of the Categories, another interpretation is worth considering.

From Table 3 it is seen that the higher items on Category I were Ways 8, 9, 3, 13, and 4. What the factor analysis has done is to pull these apart into two groups, assigning Ways 8 and 4 to the top places on Factor E, and Ways 13, 9, and 3 to the top places on Factor D. Similarly, the top four items in Category III (Ways 2, 11, 10, and 1) are separated in the factor analysis, Ways 11 and 2 having the high loadings on Factor C, and Ways 1 and 10 the high loadings on Factor A.<sup>19</sup> And, as mentioned, the China analysis pulls apart the top Ways in Category II (Ways 12, 6, and 5) and assigns Way 5 to one factor and Way 12 to another.

It is as if the original categories of dependence, dominance, and detachment were not primary dimensions but higher order abstractions containing at least two factors. There seems also to be a common line of fission. Factors A, B<sub>1</sub>'', and D all involve a reference point other than the self—whether it be other persons, society, or nature. In contrast, the reference point in Factors C, B<sub>2</sub>'', and E is to some state or activity of the self. Thus the common line of cleavage seems to be between orientation to self and orientation to other than self. Table 7 exhibits a possible analysis of these relationships.<sup>20</sup>

19. Further evidence of this relation between the factors and the Categories can be obtained by adding the United States loadings for Factors A and C on the various Ways and comparing the rank order of the results to the rank order of the Ways according to Category III of Table 3. In the same way Factors D and E can be compared to Category I. The similarities are clear.

20. Because orientation to other than self could be orientation either to society or to nature, it is conceivable that under certain cultural or psychological conditions (and with "Ways To Live" expanded to include more alternatives) Factors D, B<sub>1</sub>'', and A would



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If this alternative analysis is followed, it suggests that dependence, dominance, and detachment take on different forms when the personality system is the point of reference and when the social system is the point of reference. They may or may not be given a social form and directed to social ends. "Orientation to self" and "orientation to other than self" do not give two more dimensions, since they differentiate kinds of systems and are not dimensions of systems. And dependence, dominance, and detachment are not in a statistical sense more "primary" than the factors. Hence they may be regarded as more abstract

TABLE 7  
VALUE FACTORS CLASSIFIED ACCORDING TO  
TYPE OF ORIENTATION

Categories	Orientation to Self	Orientation to Other than Self
Dependence.....	Factor E (Ways 8, 4, -10, -13)	Factor D (Ways 13, 9, 3)
Dominance.....	Factor B <sub>2</sub> '* (Ways 12, 6, -1)	Factor B <sub>1</sub> ' (Ways 5, 3, 6, -2)
Detachment.....	Factor C (Ways 11, 2, 9, -5)	Factor A (Ways 1, 10, 3, -4)

\* Way 13 is omitted from Factor B<sub>2</sub>' because of the previously mentioned problem of the translation of the Way into Chinese.

categories applying to a number of kinds of systems rather than as primary dimensions of an actually operative system.

In the following pages this second alternative is explored; a reader who prefers the former alternative will be able to reformulate the discussion in its terms. Categories I, II, and III are taken as basic terms. They are not strictly defined, but their content is indicated by the judges' analysis of the Ways (Table

again split into two factors each, giving nine primary factors. There is an indication in the content of these factors of such differences. Ways 1 and 10 essentially define Factor A, and Way 1 is explicitly social in orientation and Way 10 more oriented to the cosmos. In Factor B<sub>1</sub>', defined by Ways 5, 3, and 6, Way 5 is strongly oriented to society, while Way 6 is less so. In Factor D, defined by Ways 9 and 13, Way 9 has reference solely to nature, while Way 13 contains an explicit reference to society. The fact that these differences are held together within the factors suggests that this differentiation is not as easy to make as the differentiation between orientation to self and orientation to other than self.

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3) and by factors isolated in the United States, India, and China factor analyses. Thus Category I contains the common content of Factors D and E, Category II the common content of Factors  $B_1''$  and  $B_2''$ , and Category III the common content of Factors A and C. The terms 'dependence', 'dominance', and 'detachment' will be taken as indicating, but not strictly defining, the contents of the Categories. Other triads of terms might be better, such as 'receptivity', 'power', and 'restraint'. But 'dependence', 'dominance', and 'detachment' are employed because their use in earlier studies facilitates discussion of the relation of those studies to the present investigation. This relation and the relation of these terms to the value factors are further analyzed in the final chapter.

## *Values East and West*

### 1. PURPOSE AND PROCEDURE

This chapter surveys the value patterns formed by the differential ratings of the Ways in the various cultural groups. The aim is to characterize the samples individually and to make comparisons among them. Most attention is given to the United States, India, and China samples, where the number of subjects is largest and the data most extensive. The material from Norway and Japan also receives attention, but less so. The material from Canada is similar to that of the United States; thus except for a brief comparison with the United States results it is not used further in the analysis. Only minor references are made to some of the smaller samples. The analysis is largely confined to the male students, but a later section introduces the ratings of the women students for comparison. The chapter is essentially expository; explanation and interpretation are left mainly for later chapters.

Two of the basic sets of data for investigation have already been given: the scale values for the Ways in the United States, India, China, Japan, and Norway in Table 2; the factors and factor loadings for the United States, India, and China analyses in Tables 4, 5, and 6. Except where explicitly stated otherwise, the United States factors (Table 4) henceforth form the basis of comparison.

To these data are now added three other summaries. Table 8 gives the mean of the ratings of male respondents from six cultures. The relations between these mean ratings correspond closely to the relations between the scale values. This is slightly

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less true for the United States material than for the other groups, since in the case of the United States the scale values were obtained from a sample of 250 men while the means were obtained from a much larger sample of 2,015 men. However, the means of these two groups are very similar; thus no serious error is introduced if the scale values obtained from the smaller group are regarded as the scale values of the larger sample.<sup>1</sup> In the case of China, India, Norway, and Japan the scale values and the means were obtained from the same groups. Scale values were not computed for the Canadian material.

TABLE 8  
MEANS FOR MALE RESPONDENTS IN SIX CULTURES

Way	U.S.	Canada	India	Japan	China	Norway
1.....	5.06	5.32	5.95	5.00	4.89	5.28
2.....	2.81	2.64	3.99	4.05	2.95	3.54
3.....	4.22	4.64	5.34	5.30	5.10	5.28
4.....	3.74	3.33	3.63	3.62	3.17	3.17
5.....	4.26	4.24	4.74	4.65	5.14	3.78
6.....	4.88	4.57	5.29	5.04	5.31	5.02
7.....	5.58	5.65	4.71	4.22	4.72	4.95
8.....	4.53	4.85	4.24	3.65	3.98	3.95
9.....	2.95	3.05	3.37	3.93	2.57	3.63
10.....	3.85	3.73	5.32	4.65	3.69	4.30
11.....	2.77	2.72	3.74	3.77	2.58	2.87
12.....	4.41	4.12	4.54	3.96	4.54	4.34
13.....	2.23	2.35	4.01	3.17	5.47	3.09
Av.....	3.94	3.94	4.53	4.23	4.16	4.09
N.....	2,015	170	724	192	523	149

D's between the five main cultural groups as computed from the scale values of Table 2 and from the means given in Table 8, the correlation between the two sets of D's being .989, are presented in Table 9.

The factor scores for the same five groups were computed. The factor score for a given factor is in this instance determined by multiplying the scale value of each Way in a given sample by

1. The main differences in the means for these two groups are for Ways 1, 4, 7, and 8. For the 250 group and the 2,015 group these means are respectively 5.20, 5.06; 3.51, 3.74; 5.76, 5.58; 4.34, 4.53. Of these the only significant differences are for Ways 4 and 7, just barely so.

the factor loadings of that factor and summing the results.<sup>2</sup> Table 10 presents these scores. Figure 3 plots these scores for easier comparison.

In addition to these quantitative data some use will also be made in the following pages of the more informal material

TABLE 9  
D'S BASED ON SCALE VALUES AND ON MEANS

	SCALE VALUES				MEANS			
	India	Japan	China	Norway	India	Japan	China	Norway
U.S. ....	2.36	2.05	2.44	1.45	3.34	3.02	3.72	2.17
India. ....		1.27	2.10	1.53	.....	1.84	3.08	2.18
Japan. ....			2.26	1.13	.....		3.46	1.76
China. ....				1.97	.....			3.13

gathered from the written comments and suggestions for alternative modes of life made by the students.

## 2. THE UNITED STATES SAMPLE

Table 11 brings together the main results of the United States male ratings of the Ways.<sup>3</sup> Table 12 exhibits the means for samples from six universities in various parts of the country.<sup>4</sup>

These six samples, selected in terms of geographical spread, indicate the small range of variations in the total United States sample. There are differences in the means, to be sure, some of them significant, but most of them not. The rank orders for the

2. This gives an approximation to the more complex method used by Thurstone (*op. cit.*, pp. 511-17). The correlation of D's based on factor scores and those based on scale values is .89. Factor scores do not represent the full content of the Ways, and ought not to be used as the sole basis for comparisons.

3. The average standard deviation of the means is 1.58, and the range is from 1.38 (Way 7) to 1.74 (Way 4). In terms of the scale values, however, Way 7 has the largest standard deviation. It has already been remarked that standard deviations on these two bases differ considerably. Those based on scale values more clearly reflect the dispersion of preferences, and they alone are expressed in this chapter.

4. The figures in the Yale sample are of some interest because an effort was made to get replies from all members of a large class. The general similarity of the means to those of the total United States sample increases confidence that the total sample, based often on volunteers, is not essentially biased because of this fact.

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various groups are much the same. The study of such genuine differences as do exist would provide a method for studying intracultural differences, but that is not our purpose here. In general the United States sample shows marked homogeneity, and for the most part one would seldom, if ever, be in doubt as to which cultural group a given sample belonged.<sup>5</sup>

TABLE 10  
FACTOR SCORES FOR FIVE NATIONAL GROUPS

Groups	A	B	C	D	E	Mean
U.S. ....	.43	.47	-1.35	-.87	.35	-.19
India. ....	1.55	.72	-.40	.30	-.20	.39
Japan. ....	.93	.30	-.33	.10	-.07	.19
China. ....	.81	.96	-1.49	.45	-.51	.04
Norway. ....	1.09	.32	-.82	-.11	-.12	.07
Mean ...	.96	.55	-.88	-.03	-.11	.10

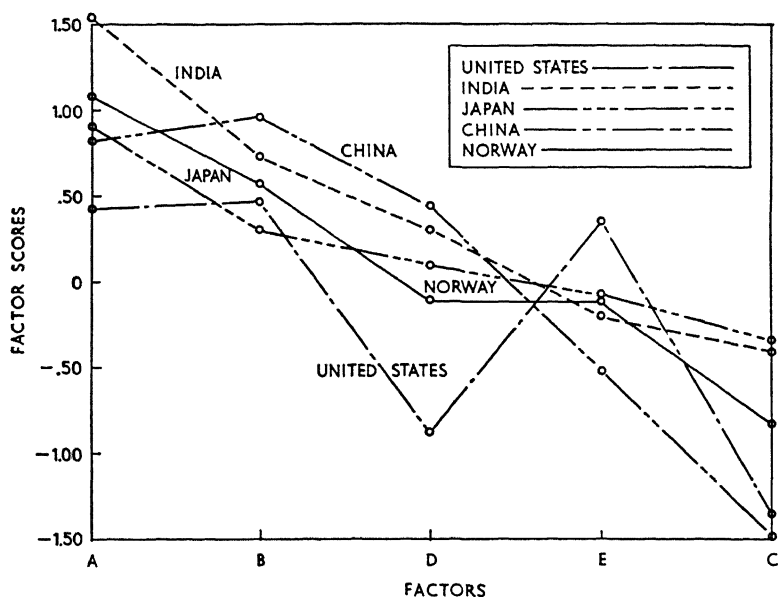


FIG. 3.—Factor scores for five national groups

5. This of course holds for random samples only. Special groups such as ministers, athletes, and nurses may show marked divergencies from the general pattern. Instances of this are mentioned later.

*Values East and West*

The average mean of 3.94 in the total sample is very close to the midpoint and shows that the "Ways To Live" document offers to these students a range of alternatives that are on the whole favored about as much as disfavored; seven of the alternatives are given a positive rating and six a negative one. Ways

TABLE 11  
BASIC UNITED STATES DATA (MALE)

Way	Rank Order by Scale Values (N=250)	Standard Deviations of Scale Values	Way	Rank Order by Means (N=2,015)	Way	Percentage of First Choices (N=1,484)
7.....	1.24	1.11	7.....	5.58	7.....	36.19
1.....	.80	.74	1.....	5.06	1.....	15.36
6.....	.47	.88	6.....	4.88	6.....	10.31
12.....	.33	.88	8.....	4.53	8.....	10.11
8.....	.26	1.03	12.....	4.41	3.....	6.06
5.....	.20	.91	5.....	4.26	12.....	5.46
3.....	.18	.91	3.....	4.22	5.....	4.72
10.....	— .09	.99	10.....	3.85	4.....	4.11
4.....	— .26	1.00	4.....	3.74	10.....	3.84
9.....	— .60	.83	9.....	2.95	2.....	1.62
11.....	— .71	.89	2.....	2.81	13.....	.94
2.....	— .78	.83	11.....	2.77	11.....	.88
13.....	— 1.17	1.05	13.....	2.23	9.....	.40
Sum...	— .13	12.05		51.29		100.00
Mean...	— .01	.93		3.94		.....

TABLE 12  
SIX UNITED STATES SAMPLES (MEANS)

Way	Yale (N=377)	Florida (N=96)	Tennessee (N=157)	Kansas (N=203)	Wyoming (N=41)	California (N=144)
1.....	5.04	5.19	5.20	5.17	5.27	4.44
2.....	2.65	2.92	2.42	3.10	2.76	3.26
3.....	4.24	4.09	4.15	4.35	3.95	3.73
4.....	3.77	3.50	3.87	4.10	4.15	4.25
5.....	4.33	3.59	4.54	4.06	4.37	4.00
6.....	4.73	5.03	4.87	4.89	5.24	4.74
7.....	5.78	5.57	5.43	5.53	5.56	5.76
8.....	4.70	4.19	4.83	3.74	4.80	4.60
9.....	2.86	2.96	2.82	3.09	2.78	3.01
10.....	3.58	3.88	4.00	4.09	3.95	3.39
11.....	2.27	2.75	2.59	3.24	2.63	2.88
12.....	4.56	4.01	4.77	4.16	4.76	4.27
13.....	2.04	2.30	2.57	2.28	2.22	1.84
Sum....	50.55	49.98	52.06	51.80	52.44	50.17
Mean....	3.90	3.84	4.00	3.98	4.03	3.85

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7, 1, and 6 are distinctly favored and Ways 9, 2, 11, and 13 distinctly disfavored. Way 7 dominates the scene and has no corresponding place in any other of the major samples.<sup>6</sup> Way 7 gathers 36 per cent of the first choices, as much as the next three favored Ways taken together. The four top Ways are given about 72 per cent of the total first choices, while Ways 2, 9, 11, and 13 (lowest in terms of means) together are given less than 4 per cent of the first choices. Way 6, with its emphasis upon constructive action, is in third place, but it is not strongly favored and is indeed rated lower than in Norway, China, India, or Japan. Way 3, with its overtones of Christian ethics, is seventh in rank and fifth in terms of first choices; it is rated lower than in any other sample, except the small Italian one.

In terms of factor scores (Table 10 and Fig. 3), Factor B (enjoyment and progress in action) has a slightly higher score than any other factor. Of the other factor scores, two of them (Factor D, receptivity and sympathetic concern, and Factor A, social restraint and self-control) are lower than in any other of the five major samples. The score on Factor C (withdrawal and self-sufficiency) is very low. The United States score is the highest on Factor E (self-indulgence).

In terms of D's based on scale values, the United States sample is nearest to that of Norway and farthest from the China and India samples; these last two D's reveal the largest cultural differences between the five main groups. The United States students are much nearer to the Canadian students than to the Norwegian students.<sup>7</sup> Largely for this reason, the Canadian material will not be given an independent place in the comparisons that follow, but it may be well to note here its differences from the United States sample. Table 8 gives the Canadian and United States means. The Canadian men are higher on Ways 1, 3, and 8 and lower on Ways 2, 4, 6, and 12.

6. Its place is, however, quite similar in the Canada sample, and in small samples from Glasgow and London. The three means are respectively 5.64, 5.64, 6.42, the last sample including only 17 subjects.

7. Since the scale values for Canada were not computed, the D for the United States and Canada comparable to the scale value D's in Table 9 cannot be given. But the D computed by means for the United States and Norway is 2.17, while for the United States and Canada it is .95. The standard deviations are also very similar.



This would mean that the Canadian students are somewhat higher on Factor A (social restraint and self-control) and somewhat lower on Factor B (enjoyment and progress in action) than the American students. The rank-order correlation between the two sets of means is, however, .95, so the total differences are small.

Before attempting to summarize the United States results, some attention may be given to the written suggestions of the students concerning a desirable mode of life. Such informal written material must be used with caution, since only a small percentage of the respondents gave such comments, and they may not be representative of the total sample. Nevertheless, this informal material is of interest at several points. The suggestions from the United States, China, India, and Norway<sup>8</sup> were classified into fourteen categories ("stress on service to fellow men," "live for your own happiness," "importance of the relation of man to God," and the like), and these in turn were when possible further grouped into four categories: orientation to self, to society, to the cosmos, to both self and non-self. It is on the basis of these two sets of classifications that comments upon the students' suggestions are made.

The United States students' suggestions have a number of distinctive features. Unlike students in the other three groups, some of them suggest that all the Ways are unsatisfactory and that no attempt should be made to formulate an alternative lest life be restricted and forced into a mold. This is akin to the desire for flexibility evidenced by the high rating of Way 7. Furthermore, the relative number of entries for the United States group in the category "orientation to self" is somewhat stronger than in any other national group, while those in the category "orientation to society" are somewhat weaker. There is also some feeling that the "Ways To Live" document should put more emphasis upon personal possessions—a feeling not elsewhere expressed. At the same time, and in an opposite direction, the most general criticism of the document is that it does not stress social co-operation sufficiently. A number of those

8. The Japanese translation made no provision for such suggestions.

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who favor Way 7 do so with the reservation that it must be combined with other Ways (mainly Ways 6 and 1) which encourage the assumption of social responsibility. And the entries in the category "orientation to society" are, as in the case of the other national groups, more frequent than those in the categories "orientation to self" or "orientation to cosmos."

It is not easy to bring all of this to a focus. The factor scores give the impression that the United States students are activist and self-indulgent, less subject to social restraint and less open to receptivity than any of the other four groups, and second lowest in inwardness. But this impression needs to be qualified by the high place given to Way 7. Way 7 stresses flexibility and many-sidedness and explicitly provides a place for contemplation and enjoyment as well as for action.<sup>9</sup> Since it accepts values represented by various factors, but none of them to an extreme or exclusive degree, it has no high positive or negative loading on any factor. Way 7 is the only alternative for which this is true; hence the importance of Way 7 for United States students is not reflected in any interpretation or comparison based on factor scores alone. And the written comments show that a number of persons in accepting Way 7 wish to link with it the attitudes of social concern and responsibility. The comments in general seem to evidence somewhat more concern with society and co-operative work with others than either the factor scores or the scale values would suggest.

Additional insight into the characteristics of those who highly favor Way 7 can be gained by comparing the ratings of 112 men and women who liked Way 7 very much with the total United States group (averaging the mean ratings of men and women) and with the ratings of sixty-four persons who disliked Way 7 (rating it 1, 2, or 3), as shown in Table 13.

A comparison of columns 1 and 2 of this table enables one to see that those who like Way 7 very much are higher than the general student population on Ways 1, 2, 4, and 10 and lower

9. James M. Gillespie and Gordon W. Allport write as follows: "What is the predominant value-orientation of the American student? The best way to generalize his goals seems to be in terms of the search for a rich full life" (*Youth's Outlook on the Future*, pp. 13-14).

on Way 5;<sup>10</sup> they are also somewhat higher on Way 11 and lower on Ways 3 and 13. Hence they are somewhat more detached and less dependent than the general student population. Only in their response to Way 5 did they differ much with respect to dominance.

Not many of the students gave a negative rating to Way 7; but those who did also rated Ways 2, 4, and 6 considerably lower than those who liked Way 7 very much, and they rated Ways 3 and 13 markedly higher.<sup>11</sup> Thus in these persons de-

TABLE 13  
COMPARATIVE DATA ON MEAN RATINGS  
OF THE WAYS IN TERMS OF  
RATINGS OF WAY 7

Way	Way 7 Liked Very Much (N = 112)	Total United States Sample (N = 2,846)	Way 7 Disliked (N = 64)
1.....	5.54	5.11	5.89
2.....	3.14	2.71	2.62
3.....	4.13	4.33	4.96
4.....	4.25	3.72	3.05
5.....	3.93	4.31	4.00
6.....	4.81	4.83	4.39
8.....	4.50	4.48	4.53
9.....	3.09	3.01	3.06
10.....	3.93	3.64	4.19
11.....	2.98	2.75	2.94
12.....	4.33	4.24	4.20
13.....	2.20	2.38	3.87

tachment is lower and dependence higher. They do not, however, show more social responsibility than those who like Way 7

10. A difference of means of about .30 is here significant. Henceforth throughout this study 'significant' and 'statistically significant' indicate that the results reach at least the .05 level of statistical significance, i.e., that such results would be due to chance five or less times per hundred cases. Occasionally a more specific figure is given.

11. A difference of means of about .50 is statistically significant for the comparison of columns 1 and 3 in Table 13. In this, and in most similar statements to be made, the figure is approximative, since it has been calculated in terms of an average standard deviation of 1.60 for the ratings of the Ways. Actually, of course, the standard deviation is not the same for all of the Ways; thus in the male United States sample, as has been noted, the range of standard deviations is from 1.38 for Way 7 to 1.74 for Way 4. The average standard deviation and the range are noted in connection with the other main national samples.

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very much, in so far as social responsibility is reflected in the ratings of Way 1.

The high favor accorded to Way 7 is the most distinctive fact uncovered in the United States analysis. That Ways 3 and 6 are rated lower than in any other of the six groups, except for Way 6 in Canada, is also striking. The United States students seem to wish most of all to be flexible and many-sided. They show less restraint than the Indian students and less commitment to social causes than do the Chinese or Indian students. But the acceptance of Way 7 shows that they do not wish to reject all detachment, and the high ratings of Ways 1 and 6 by those who like Way 7 very much show that they do not wish to be socially irresponsible. The situation as revealed in the analysis as a whole is complex, and none of the common generalizations concerning American youth does it full justice.<sup>12</sup>

### 3. THE INDIA SAMPLE

Table 14 incorporates the main male India data, and Table 15 gives four regional samples. In terms of the means or scale values, Ways 1, 10, 6, and 3 present the characteristic values of these Indian students, and Ways 2, 13, 11, 4, and 9 the attitudes of lowest value. In terms of first choices, however, Way 7 is given second place. Way 1 has outstanding prominence, playing the role in the Indian value pattern that Way 7 plays in the United States pattern. Way 1 also has the lowest standard deviation. Way 1 is given about the same number of first choices as Ways 3, 6, and 10 together; and these four Ways account for about 55 per cent of the first choices. Ways 2, 4, 9, and 11 (lowest in means) receive about 12 per cent of the first choices.

Since Ways 1, 10, and 3 characterize Factor A, India has a

12. An additional line of evidence for the United States students' stress on flexibility and many-sidedness may be found in the fact that they liked best the Ways with low communalities and likes least those with high communalities ( $r = -.79$ ). This relation does not hold to any such degree in the Asiatic samples. The communality of a Way is the sum of the squares of its factor loadings. The higher the communality the more important are the common value dimensions. The favoring of Ways with low communalities would seem to represent a preference for a many-sided life. The order of communalities for the Ways in the United States analysis (from low to high) is: 7, 6, 3, 8, 1, 5, 10, 11, 9, 12, 13, 4, 2.

TABLE 14  
BASIC INDIA DATA (MALE)\*

Way	Rank Order by Scale Values (N=724)	Standard Deviations of Scale Values	Way	Rank Order by Means (N=724)	Way	Percentage of First Choices (N=543)
1.....	1.36	.90	1.....	5.95	1.....	27.80
10.....	.98	1.12	3.....	5.34	7.....	14.55
6.....	.93	1.02	10.....	5.32	3.....	10.31
3.....	.91	.91	6.....	5.29	10.....	9.58
5.....	.54	1.04	5.....	4.74	6.....	7.74
7.....	.46	1.02	7.....	4.71	8.....	6.82
12.....	.39	.99	12.....	4.54	5.....	5.89
8.....	.19	1.21	8.....	4.24	4.....	5.52
2.....	.08	1.06	13.....	4.01	13.....	3.87
13.....	.06	1.27	2.....	3.99	2.....	3.13
11.....	— .15	.98	11.....	3.74	12.....	1.84
4.....	— .21	1.18	4.....	3.63	11.....	1.66
9.....	— .33	.98	9.....	3.37	9.....	1.29
Sum..	5.21	13.68		58.87		100.00
Mean.	.40	1.05		4.53		.....

\* The standard deviations of the means are not included in this table. The average of such deviations is 1.65, and the range is from 1.16 (Way 1) to 1.96 (Way 13).

TABLE 15  
FOUR INDIA SAMPLES (MEANS)

Way	Benares (N=94)	Way	Andhra Province (N=72)	Way	Madras Province (N=108)	Way	Bombay (N=19)
1.....	5.90	1.....	6.25	1.....	6.09	1.....	5.76
6.....	5.62	6.....	5.93	10.....	5.64	7.....	5.54
7.....	5.58	3.....	5.91	3.....	5.30	10.....	5.37
3.....	5.22	5.....	5.78	6.....	5.11	5.....	5.27
10.....	5.10	10.....	5.66	12.....	4.71	12.....	4.95
5.....	4.66	8.....	5.32	2.....	4.62	6.....	4.95
12.....	4.38	13.....	5.22	8.....	4.22	3.....	4.85
11.....	3.78	7.....	4.76	11.....	4.16	11.....	3.85
8.....	3.75	2.....	4.57	7.....	4.15	13.....	3.48
2.....	3.64	12.....	4.44	4.....	4.14	8.....	3.32
13.....	3.46	9.....	4.16	5.....	3.98	4.....	3.00
4.....	3.33	11.....	4.10	13.....	3.34	9.....	2.85
9.....	3.17	4.....	3.98	9.....	3.28	2.....	2.21
Sum..	57.59		66.08		58.74		55.40
Mean.	4.43		5.10		4.52		4.26

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very high score for the factor on which the United States has the lowest score; therefore the Indian value pattern is characterized by a strong emphasis upon social restraint and self-control. While the score on Factor C (withdrawal and self-sufficiency) is negative, India stands second highest on this factor, with Japan only slightly higher. India is second highest also on Factor D (receptivity and sympathetic concern). But Ways 6, 3, and 5 are likewise rated highly, indeed higher than in the United States, and since Ways 5 and 6 figure prominently in Factor B (enjoyment and progress in action) India has second place on that factor too.<sup>13</sup>

In terms of D's based on scale values the Indian value pattern is most like that of Japan and most unlike that of the United States.

We have noted before that while the factors in the United States, India, and China factor analyses are much the same, they are not identical. This suggests that the content of a factor in a given analysis is partly determined by the culture from which the data are derived. Thus the Indian Factor A' (see Table 5) has a noticeable factor loading on Way 2, while the analogous United States Factor A does not.<sup>14</sup> Perhaps this may be explained as follows: India very early incorporated the life of meditation into Hinduism, and in a way that was not disruptive to the social structure; hence Way 2 would be perceived as part of the cultural heritage which is to be preserved and so linked with Way 1 on Factor A'. In the United States this would not be the case, for the attitude expressed in Way 2 has played little part in the American heritage. Nor would Way 2 always have been so interpreted in India. When Bud-

13. It may be felt that this is caused simply by the high average rating of the Ways by the Indian students. But if the means are equalized with those of the United States (by subtracting .59 from the Indian means), the total picture is much the same. It is true that India after such a subtraction is somewhat lower than the United States on Factor B, but its score on that factor would still be surprisingly large in terms of traditional conceptions of India. And of course the assumption that the Indian students must have the same average rating as American students for the total set of alternatives is a gratuitous one.

14. This is true also for Factor A'' in the China analysis. A similar explanation would seem to hold there as in India.

dhism first appeared in India, it threatened the then existing traditions (including the traditions concerning the place of detachment in life), and was opposed as a challenging and unsettling force. Under such conditions Way 2 might have had a negative loading with respect to Factor A'.

As another instance of the possible cultural influence on the content of a factor, it may be noted that Indian Factor D' is characterized by Ways 13 and 3, while the United States Factor D is characterized by Ways 13, 9, and 3. Why does not Way 9 appear in the Indian Factor D'? One cannot be sure, but the fact that Ways 10 and 2 have a higher rank on Factor D' than they do on Factor D suggests that receptivity in India is given a more cultural turn than in the United States, i.e., the sense of being receptive to the Indian tradition working through the individual rather than being receptive to nature (Way 9).<sup>15</sup>

Turning now to the written comments of the Indian students, it may first be noted that twice as many comments were made as came from American students, and no one suggested that attempts to formulate a way of life ought to be avoided. The Indian comments are distinctive in a number of respects. The emphasis upon service to one's fellow men is greater than in any other sample of comments (though only slightly higher than in the China sample), and so is the stress upon the need of combining the cultivation of the inner life with outward and socially responsible action. Very few commentators advocate remaining aloof from the world, but the concern with inwardness is certainly greater than in any other group from which comments were obtained. As in the United States, a number of persons suggest combining Way 7 with some form of social concern. The orientation to the cosmos is much lower than the orientation to society, a fact which may perhaps be explained in terms of the remarks on Indian receptivity in the preceding paragraph. Finally, the comments show a great range of diversity; all of the dimensions of value find a voice, as they have indeed done in the cultural tradition of India, a tradition which

15. It is interesting that in India Way 9 has the lowest mean and scale value of any of the Ways. Japan favors Way 9 the most, and Norway next. One is tempted at this point to enter into geographical speculation.

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almost alone has insisted upon the need for different modes of life appropriate to different kinds of persons. One objective bit of evidence of this diversity in the comments is found in the circumstance that a greater number of various combinations of the Ways is proposed than in any other group.

If we now bring together the analytic data with the written comments, the result seems to be as follows. The distinctive and controlling element in the Indian value pattern is represented by tradition-oriented Way 1, and in general by Factor A (social restraint and self-control). This tradition has given a high place to inwardness though it has also made room for action and devotion. Under the pressure of urgent social problems (such as extreme and widespread poverty) the recognition of the need for social reconstruction has raised the appeal of Ways 6 and 5 and brought Factor B (enjoyment and progress in action) to the place of second strength. Indian youth, therefore, finds the reconciliation of tradition and reconstruction a pressing problem, and as a phase of this problem, the integration of inwardness and outer activity. All of the value dimensions are of sufficient strength to make themselves felt (India has the largest mean factor score of any of the groups). The appeal of Way 7 (second in rank in first choices though only sixth in rank in terms of means and scale values) to certain persons is therefore understandable since Way 7 explicitly seeks the integration of diversity.<sup>16</sup> The high rating of Way 10 (though only fourth in terms of first choices) is perhaps an indication of the sense of the magnitude of the task, and certainly it is a buffer against failure to achieve it. Or perhaps Way 10 has in it something of the integration of action and detachment which characterizes the doctrine of karma-yoga in the *Bhagavad-Gita*.

We will conclude this section with a short reference to the ratings of Muslims within India. One sample of questionnaires from sixty-seven men was actually collected in Pakistan, but almost all of the respondents had spent the main part of their

16. What persons favor Way 7 is not the problem of this chapter. But the discrepancy between rank by means and by first choices suggests that Way 7 makes a special appeal to some particular segment of the population. That this seems to be the case is indicated in chap. iv, sec. 4.



lives in India, and many had recently moved as a result of the partition of India and Pakistan. The rank-order correlation of their means and the Indian means is .94. Way 10 is now however strongest (with a mean of 6.21 and about 26 per cent of the first choices). Way 7 does not rise in favor among the first choices as it did in the total India sample. Ways 2, 4, 9, 11, and 13 together gather only 5 per cent of first choices instead of the 15 per cent of the India sample. Ways 1, 3, 6, and 10 together have about the same percentage of first choices in the two cases (66 per cent and 55 per cent, respectively). Except for the great strength of Way 10 in this material the differences are slight.

The second small sample is from twenty-six men at the Muslim University in Aligarh. The favored alternatives are, in order, Ways 1, 6, 7, 3, 10, 12, and 5, while the disliked alternatives, from least to most disliked, are Ways 2, 8, 9, 11, 13, and 4. The mean of 6.42 for Way 1 is extraordinarily high, and Way 1 receives 63 per cent of the first choices. The rank-order correlation of this Muslim sample with the India order of means is .87. Factors A and B are the strong factors in both cases. No data are at hand to permit comparison of the Muslim students in India with the students of Muslim nations.

#### 4. THE JAPAN SAMPLE

The core material for interpretation is shown in Table 16. The value pattern of the Japanese students is similar to the Indian pattern. The dominant positions in both cases are Ways 3, 1, 6, and 10, though Way 3 is in top place instead of Way 1. Way 3, however, does not dominate the scene as did Way 7 in the United States or Way 1 in India. The low liked alternatives are also similar, although Way 9 is differentially higher, and Ways 8 and 13 are differentially lower, than in the case of India. The top four favored Ways receive about 58 per cent of the first choices, and the Ways lowest in means (Ways 4, 8, 11, 13) receive 15 per cent of the first choices. Ways 2, 4, 9, and 11 receive about 17 per cent of the first choices and are thus favored more than in any other sample.

The Japan sample exhibits the lowest scale value given to Way 7 and the lowest mean value for Way 7 in any of the

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samples, large or small. Yet since it has the largest standard deviation in the Japan sample of any of the Ways, there is even under these conditions considerable difference of opinion on its value.

TABLE 16  
BASIC JAPAN DATA (MALE)\*

Way	Rank Order by Scale Values (N=192)	Standard Deviations of Scale Values	Way	Rank Order by Means (N=192)	Way	Percentage of First Choices (N=192)
3.....	.87	1.01	3.....	5.30	3.....	17.70
1.....	.70	.93	6.....	5.04	10.....	15.12
6.....	.65	.83	1.....	5.00	6.....	13.00
10.....	.46	1.05	10.....	4.65	1.....	12.00
5.....	.44	.93	5.....	4.65	7.....	8.83
7.....	.21	1.21	7.....	4.22	5.....	7.80
2.....	.09	.87	2.....	4.05	9.....	5.74
12.....	.04	.94	12.....	3.96	8.....	4.17
9.....	.03	.93	9.....	3.93	11.....	4.17
11.....	— .10	.97	11.....	3.77	2.....	3.65
4.....	— .18	.96	8.....	3.65	13.....	3.65
8.....	— .22	1.13	4.....	3.62	4.....	3.13
13.....	— .52	1.11	13.....	3.17	12.....	1.04
Sum..	2.47	12.87		55.01		100.00
Mean.	.19	.99		4.23		.....

\* The average standard deviation of the means is 1.64, and the range is from 1.44 (Way 3) to 1.87 (Way 7).

The Japanese students have a higher factor score on Factor C (withdrawal and self-sufficiency) than other groups (though the score is negative) and the lowest factor score on Factor B (enjoyment and progress in action). The order of factor scores is the same as that of India, though the scores for Factors A and B are considerably lower.

The Japanese translation did not ask for proposals of alternative modes of life, so we are without the benefit of written comments. But the general orientation is clearly to persons and to society, though somewhat less so than in India; and there is a respect of inwardness at least as great as in India, and a receptivity to nature which is greater.<sup>17</sup>

17. The analysis of the Japanese material in James M. Gillespie and Gordon W. Allport, *op. cit.*, pp. 28-30, is in substantial agreement with the present findings, though the methods there used did not catch the inwardness and the receptivity to nature revealed in this study.

### 5. THE CHINA SAMPLE

The essential data for interpretation are in Table 17, and the means for four samples from the regions of Peking, Nanking, Canton, and Chungking are shown in Table 18.

The China sample is most heavily represented by subjects

TABLE 17  
BASIC CHINA DATA (MALE)\*

Way	Rank Order by Scale Values (N=523)	Standard Deviation of Scale Values	Way	Rank Order by Means (N=523)	Way	Percentage of First Choices (N=513)
13.....	.92	.88	13.....	5.47	5.....	15.60
6.....	.85	.84	6.....	5.31	13.....	15.20
5.....	.75	.95	5.....	5.14	7.....	14.81
3.....	.72	.88	3.....	5.10	1.....	14.63
1.....	.59	.96	1.....	4.89	6.....	10.90
7.....	.51	1.06	7.....	4.72	3.....	9.17
12.....	.35	.86	12.....	4.54	8.....	7.02
8.....	.03	1.20	8.....	3.98	12.....	5.07
10.....	— .22	1.15	10.....	3.69	10.....	2.93
4.....	— .49	1.09	4.....	3.17	2.....	1.75
2.....	— .67	1.04	2.....	2.95	11.....	1.75
9.....	— .87	.96	11.....	2.53	4.....	1.17
11.....	— .91	1.09	9.....	2.57	9.....	0.00
Sum..	1.56	12.96		54.11		100.00
Mean.	.12	1.00		4.16		.....

\* The average standard deviation of the means is 1.56, and the range is from 1.29 (Way 13) to 1.89 (Way 8).

TABLE 18  
FOUR CHINA SAMPLES (MEANS)

Way	Peking (N=189)	Way	Nanking (N=55)	Way	Canton (N=49)	Way	Chungking (N=62)
13.....	5.34	13.....	5.62	13.....	5.68	13.....	5.79
6.....	5.33	6.....	5.39	6.....	5.62	6.....	5.58
5.....	5.17	1.....	5.33	3.....	5.54	3.....	5.50
7.....	5.09	5.....	5.24	1.....	5.43	5.....	5.24
3.....	5.02	12.....	4.80	5.....	5.06	1.....	4.61
1.....	4.62	3.....	4.64	12.....	4.86	7.....	4.58
12.....	4.47	7.....	4.57	7.....	4.60	12.....	4.49
8.....	3.88	8.....	4.32	8.....	4.20	10.....	3.88
10.....	3.68	4.....	3.60	10.....	3.62	8.....	3.82
4.....	3.03	10.....	3.42	4.....	3.41	2.....	3.36
2.....	2.68	2.....	2.72	9.....	2.80	4.....	3.13
11.....	2.60	9.....	2.42	2.....	2.80	11.....	3.00
9.....	2.55	11.....	2.29	11.....	2.71	9.....	2.37

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from the Peking area, who comprised about 36 per cent of the total male sample. But as Table 18 shows, the samples from central, south, and west China do not differ very much from each other or from the Peking sample. The main variations between the Peking and the other samples are in Ways 1 and 7: Way 1 tends to be lower and Way 7 higher in the Peking than elsewhere (a situation reminiscent of the contrast between north and south India). There was no noticeable difference between samples from Christian and Nationalist universities.

The distinctive feature of the Chinese material is the high place given to Ways 13 and 5. These Ways, and Ways 6 and 3, do not differ much in favor. No single alternative dominates the situation. Together these four alternatives account for about 52 per cent of the first choices; the four least liked alternatives (Ways 2, 4, 9, 11) share about 5 per cent of the first choices. Way 7 behaves somewhat as in the India sample: it is ranked sixth in terms of means but third in terms of first choices, differing little in percentage from Ways 13 and 5.

In terms of factor scores the Chinese students have the highest score on Factor B (enjoyment and progress in action) of any of the groups and the lowest score on Factor C (withdrawal and self-sufficiency). So with respect to this contrast the China sample is like that of the United States but is even more extreme. The most striking contrast between the United States and Chinese factor scores is on Factor D (receptivity and sympathetic concern). This is due in part to the fact that Way 13 was given the highest rating in the China sample and the lowest rating in the United States sample. There is considerable difference between the Chinese value pattern and the Indian. This is revealed in the factor scores for Factors A and C but even more clearly in the scale values: Ways 5 and 13 are rated much higher in China, and Ways 2, 4, 9, and 11 are definitely rated much lower.

In terms of D's based on scale values, China is most distant from the United States and next so from Japan; it is nearest to Norway and next nearest to India. But all of the D's are rather large; calculated in terms of scale values the sum of the Chinese D's is larger than that of any other group.

The China factor analysis (Table 6) shows once more how the content of a factor is somewhat influenced by the culture of which the analysis is made. The split of Factor B into Factors B<sub>1</sub>' and B<sub>2</sub>' has already been discussed. The high factor loading of Way 2 on Factor A'' is presumably due (as in the case of India) to the important place Buddhism has played in the Chinese cultural heritage: it is seen as part of the heritage that man has attained. Way 4 does not appear as the strong negative element in this factor, as it did in the United States and India analyses, perhaps because Way 4 has some slight affinities with certain aspects of Taoism and is not so opposed to the Chinese cultural tradition as it is to the traditions of the United States and India. Ways 5 and 6 are given the lowest loadings on Factor A'', and these are the Ways most challenging to the preservation of the then existing Chinese status quo. This would not have been true of either the United States or Indian state of affairs at the time. As for Factor E'' (self-indulgence), it is interesting that Ways 7 and 9 appear with noticeably higher positive loadings on this factor than in the United States analysis. The stress of Ways 4 and 8 (which identify this factor in the United States analysis) is upon sensuous enjoyment, while Ways 7 and 9 do not limit enjoyment to the sensuous level of the self. Hence "self-enjoyment" might be an alternative name for the Chinese Factor E''. Since in China the most favored Ways stressed total social commitment, seen from that perspective both Ways 7 and 9 would be perceived as self-indulgence. In the India analysis, however, Factor E' has negative loadings on both Ways 7 and 9.

The written comments and suggestions from the Chinese students were proportionately fewer than from any other sample. In the main they support the analytic results, though in one respect at least they introduce a slight change of perspective. The stress upon service to one's fellow men is high in the comments, as it was in India. Not as high, though definitely more prominent than in any other group, is the feeling that one has an obligation both to one's self and to others. There are some statements that one should live for one's own happiness, that one should be self-sufficient, that one should cultivate one's

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self; and these in their totality are evidence that some Chinese students, for all their devotion to the cause of fellow men, did not want to sacrifice themselves in the process. This may explain why Way 7 is third in first choices although sixth in rank in terms of scale values and means. In the Peking area Way 7, fourth in rank in terms of means, is first in the percentage of first choices (21.7 per cent).

In summary, the value pattern of the Chinese young people, as it appears in this study, is actively and socially oriented to an extreme degree and hence is antithetic to those modes of life directed primarily toward the self or toward nature. Yet the temper is not ascetic or grim but warmly human. While there is hardly a trace of a demanding possessive self, there is some evidence that the ancient Chinese stress on the cultivation of the self was still a living force.

### 6. THE NORWAY SAMPLE

Ways 3 and 1 dominate the means of the Norwegian value pattern, as shown in Table 19. This particular stress has previously appeared in the Japan sample.<sup>18</sup> Ways 6 and 7 are next in favor. Among the first choices, however, Way 7 is in first place, and this is unlike Japan. The ratings for Way 7 have the largest standard deviation, as was also the case in Japan and the United States.<sup>19</sup> The four most favored Ways receive 72 per cent of the first choices. The four least favored alternatives (in terms of means) are Ways 2, 4, 13, and 11; these receive about 10 per cent of the first choices. Ways 4 and 5 have the lowest scale values in any of the samples.

The order of factor scores is A, B, D, E, and C. The scores for all factors are about midway between the highest and lowest scores of the other groups (see Fig. 3), suggesting that in terms of the value dimensions Norway occupies a middle-of-the-road position between cultural extremes.

18. Ways 1 and 3 are also about equally high in the sample of 54 men from Scotland; Way 7 is still higher there, and Way 6 considerably lower than in Norway.

19. Of all of the alternatives Way 7 has the second largest average standard deviation for the five groups, exceeded only slightly by Way 8. Way 6 has the smallest average standard deviation, and the figure for Way 1 is only slightly larger.

In terms of the sum of D's Norway differs less from the other four cultures than does any other culture. The largest D is with China; the smallest D is with Japan.

The written comments and suggestions are almost as numerous as in the India sample. They are decidedly more religious in tone than in any other set; almost a fourth of them contain an explicit reference to Christianity, and the content of

TABLE 19  
BASIC NORWAY DATA (MALE)\*

Way	Rank Order of Scale Values (N=149)	Standard Deviations of Scale Values	Way	Rank Order of Means (N=149)	Way	Percentage of First Choices (N=149)
3.....	.96	1.13	3.....	5.28	7.....	25.10
1.....	.83	.90	1.....	5.28	1.....	18.20
7.....	.66	1.25	6.....	5.02	3.....	17.50
6.....	.62	.82	7.....	4.95	6.....	11.20
10.....	.24	1.15	12.....	4.34	5.....	6.30
12.....	.22	.89	10.....	4.30	8.....	4.20
8.....	— .02	1.16	8.....	3.95	2.....	3.50
5.....	— .07	.90	5.....	3.78	10.....	3.50
2.....	— .25	1.07	9.....	3.63	13.....	3.50
9.....	— .25	.90	2.....	3.54	12.....	3.50
4.....	— .55	1.11	4.....	3.17	4.....	1.40
13.....	— .56	1.09	13.....	3.09	11.....	1.40
11.....	— .70	.92	11.....	2.87	9.....	0.70
Sum...	1.13	13.29		53.20		100.00
Mean.	.09	1.02		4.09		.....

\* The average standard deviation of the means is 1.61, and the range is from 1.34 (Way 6) to 1.77 (Way 10).

many others is specifically Lutheran in character. The orientation is more to society and the cosmos than to self. Noticeably low is any emphasis upon self-indulgence, possessiveness, or desire for power as such. There is more stress upon meditation and inwardness than Table 19 would lead one to infer, and one senses a strong contrast to the United States comments in this respect. The meditative note is not for the sake of withdrawal or the enjoyment of the inner life; it seems to be more akin to listening to the voice of conscience in order to prepare one's self for one's human work.

The informal data support the impression gained from the

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quantitative data that the Norwegian value pattern avoids the extremes found in other national groups. The D between Norway and India is about the same as the D between Norway and the United States (Table 9). The fact that in terms of D's Norway is nearer to Japan than to the United States does not of course make Norway more "Oriental" than "Western." With respect to scale values Norway is higher than Japan on five of the alternatives and higher than the United States on another five. The D between the United States and Norway is less than the D between the United States and any of the three Asiatic groups. The main similarity of Norway to Japan (as contrasted to the United States) is the high place given to Way 3; the main similarity of Norway to the United States (as contrasted to Japan) is the relatively high place given to Way 7. The latter similarity shows itself in the scale values but even more sharply in the first choices: both in Norway and in the United States Way 7 is given the highest percentage of first choices. Norway is akin to the United States in the favor shown to Way 7, but it subordinates this emphasis upon flexibility and many-sidedness to a stronger concern with social restraint and self-control, and it does not reject receptivity and inwardness in the extreme manner of the United States students.

### 7. MALE AND FEMALE

That the differences in evaluation between United States male and female students are not large is shown in Table 20. The D on the two sets of means is only .74. The average of the means is 3.94 for both men and women; the average standard deviation for men is 1.58 and for women 1.64. Differences in means of about .13 are significant for this number of cases. By this criterion the United States women are significantly higher than the men on Ways 3, 7, and 13, and significantly lower on Ways 2, 10, and 12. In addition, the women are slightly higher on Ways 1, 4, 5, and 9, and slightly lower on Ways 6, 8, and 11.

The mean ratings for women students in Canada, India, Japan, China, and Norway (a group of Christian women in India receives separate attention in the following chapter) are presented in Table 21.



TABLE 20  
UNITED STATES MEN AND WOMEN

Way	MEN			WOMEN		
	Means (N=2,015)	Standard Deviations	Percentage of First Choices (N=1,484)	Means (N=831)	Standard Deviations	Percentage of First Choices (N=505)
1.....	5.06	1.46	15.36	5.16	1.49	15.25
2.....	2.81	1.56	1.62	2.61	1.58	1.78
3.....	4.22	1.62	6.06	4.43	1.66	4.55
4.....	3.74	1.78	4.11	3.81	1.84	3.37
5.....	4.26	1.70	4.72	4.36	1.73	5.74
6.....	4.88	1.47	10.31	4.77	1.41	4.36
7.....	5.58	1.38	36.19	5.84	1.49	47.13
8.....	4.53	1.71	10.11	4.42	1.81	8.32
9.....	2.95	1.45	0.40	3.07	1.56	0.59
10.....	3.85	1.76	3.84	3.43	1.80	1.78
11.....	2.77	1.53	0.88	2.74	1.60	0.40
12.....	4.41	1.57	5.46	4.06	1.79	4.36
13.....	2.23	1.52	0.94	2.53	1.62	2.38

TABLE 21  
MEAN RATINGS OF WOMEN IN FIVE NATIONAL GROUPS

Way	Canada (N=144)	Way	India (N=291)	Way	Japan (N=110)	Way	China (N=143)	Way	Norway <sup>1</sup> (N=75)
7.....	6.01	1...	6.06	3...	5.20	13...	5.65	1...	5.56
1.....	5.18	10...	5.44	1...	5.08	3...	5.34	3...	5.52
3.....	4.83	3...	5.41	10...	4.53	1...	5.22	7...	5.31
8.....	4.67	6...	5.30	6...	4.43	5...	5.05	6...	4.57
5.....	4.37	7...	5.17	11...	4.40	6...	4.99	12...	4.14
6.....	4.26	5...	5.10	7...	4.15	7...	4.85	9...	4.03
12.....	3.94	13...	4.67	2...	4.13	12...	4.34	10...	3.92
4.....	3.45	12...	4.52	9...	4.13	8...	4.17	2...	3.61
10.....	3.17	8...	4.26	5...	4.10	10...	3.76	5...	3.56
9.....	2.94	9...	4.08	4...	3.71	4...	3.57	8...	3.36
13.....	2.53	2...	4.05	12...	3.63	9...	3.01	13...	3.36
11.....	2.45	4...	4.01	13...	3.40	2...	2.99	4...	2.91
2.....	2.41	11...	3.89	8...	3.28	11...	2.73	11...	2.76
Sum..	50.21		61.97		54.17		55.67		52.61
Mean..	3.86		4.77		4.17		4.28		4.05
Av. SD	1.53		1.58		.....		.....		1.63

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In all six samples<sup>20</sup> the women are higher than the men on Way 13 and lower on Ways 6 and 12. In five of the six samples the women are higher than the men on Ways 4, 7, and 9, and lower on Ways 8 and 10. This suggests that women tend to be lower than men on Factor B (enjoyment and progress through action) and higher than men on Factor D (receptivity and sympathetic concern).

More important than the differences are the similarities. In general women and men in the groups here studied follow very closely the same cultural value patterns. There are differences in the degree of similarity, and they are of some interest. The D's between men and women are in order of difference as follows: United States, .74; China, .87; Canada, .93; India, 1.15; Norway, 1.17; Japan, 1.21.<sup>21</sup> But these differences are in general considerably smaller than the differences between the various cultural patterns themselves.

### 8. SOME GENERAL OBSERVATIONS

Certain differences and similarities encountered in the foregoing analyses may be brought into sharper relief.

The diversities are evident enough and rule out any simple separation of East and West in terms of student ratings of the Ways. We have seen that the Chinese students were like American students in some respects and unlike them in others; and the same holds for their relation to Japanese and Indian students. Norway had certain linkages with the United States but also certain similarities to Japan. The Japanese and Indian material had much in common, but the differential favoring of Way 7 and the difference in the factor scores on Factors A and B highlight important contrasts.

The mean rating of the total set of Ways is higher for Japanese, Chinese, and Indian men and women than it is for American, Norwegian, and Canadian men and women. Similarly, the

20. The mean ratings of Indian women are in general so much higher than those of the men that comparison is difficult. Hence the average difference in the mean ratings of Indian men and women (.24) was subtracted from the Indian women's mean rating of each Way.

21. Although the order seems to make sense, the differences may be an artifact due to sample sizes.

means of the five factor scores are higher in the India and Japan samples than in the Western ones.<sup>22</sup> Taken together these items seem to indicate that the Asiatic groups are more tolerant of cultural diversity than the Western groups. On the other hand, the high place given to Way 7 in the three main Western groups may be interpreted as showing that the Western groups are more tolerant of diversity within the individual (psychological diversity) than are the Asiatic groups. This general contrast seems legitimate and illuminating, but it should not be pushed too far. In China and India (and to a less extent in Japan) Way 7 makes considerable appeal to a number of persons, as evidenced by the number of first choices it receives.

A related, but not identical, contrast might be drawn between the more self-centered orientation of the Western students and the more society-centered orientation of the Asiatic students. This, too, within limits seems a valid observation, especially when the contrast is made to the United States results. But it cannot be expanded into a distinguishing characteristic of East and West in general. Historically there have been times when the emphasis has been reversed. The present contrast may be due largely to the fact that the social problems facing the Asiatic nations were at the time of the ratings much more serious than those facing the Western nations. This may also help explain why the stress on action (Factor B) is so much stronger and the stress on detachment (Factor C) so much weaker than would be expected in terms of the traditional conceptions of the Orient. Everywhere man has the need of caring for both his self and his society, and where the emphasis will fall depends upon where the problems are most insistent.

If we turn from contrasts to a search for similarities, it may be noted that in spite of important cultural differences there is still considerable agreement in the over-all liking of many of the Ways. Thus Ways 1, 3, and 6 are generally high in rank order of liking and Ways 3, 4, 9, and 11 are generally low. The same point can be made in terms of factor scores: in all five samples either Factor A is first in score and Factor B second,

22. The figures are: India, .39; Japan, .19; Norway, .07; China, .04; United States, —.19. See Table 10.

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or Factor B is first in score and Factor A second; with one exception the remaining three factor scores have the order D, E, C in all five samples. The fact that the subjects are young people living at the time of maximum vitality and that all of them have been subjected to the socialization pressures of their cultures is certainly congruent with these results. Such generalizations, however, do not give us detailed insight into these matters. Are there basic uniformities in human nature and in human interactions which cross cultural boundaries and in terms of which certain modes of life are objectively better (stand higher in object value) than others?

Before we can consider such a question, or in general deepen our understanding of both the similarities and differences between the cultural groups considered in this and the preceding chapter, it is necessary to break new ground at another level of analysis.

## *Social Determinants of Value*

### 1. THE PROBLEM OF EXPLANATION

A type of knowledge about conceptions of the good life has been illustrated by the use of value scales and value dimensions in the preceding two chapters. Such knowledge is not in itself adequate for an explanation of *why* the ratings in the several cultures were as they were. From the scientific point of view, one would like to state laws in which the ratings of the Ways considered as one variable would be functionally related to other variables. Obviously, one must know the other variables for this to be possible.

In broad terms, data from four facets of life seem to be relevant to the problem. An individual rating the Ways is a person of a certain physique, with a certain temperament and character, living in a society with its own problems and traditions, all this occurring somewhere on the earth. In so far as the ratings are influenced by these contexts in which they occur, we may speak of the contexts as biological, psychological, social, and ecological determinants of value. In so far as happenings in these contexts can be quantified, we may speak of biological, psychological, social, and ecological variables.<sup>1</sup> The problem then becomes one of finding relations between the ratings of the Ways and the other variables.

It is possible, of course, that values are influenced by some

1. Some such framework is becoming commonly accepted. It was used in *The Open Self* and is the organizing scheme for such works as Laura Thompson's *Culture in Crisis*, and Kluckhohn and Murray's *Personality in Nature, Society, and Culture*.

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of the four determinants and not by others. And even if all four contexts are influential, their influences may not be of equal weight. The hypothesis held here is that variables in all four domains are interrelated so that a change in the variables in any one domain is accompanied by a change in the variables in the other domains, with values changing accordingly. This is a "field theory" approach applied to the domain of value, as represented in Figure 4.

Figure 4 expresses this conception but is defective in that it leaves the temporal dimension unrepresented. This defect may

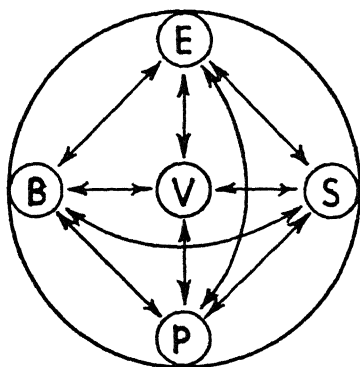


FIG. 4.—The value field. *E*, *S*, *P*, and *B* respectively signalize ecological, social, psychological, and biological determinants of values, or *V*.

to some extent be remedied if the diagram be thought of as the cross-section of a tube extending behind and out from the page, the extension of the tube representing the temporal dimension. It may be noted that the lines on the diagram have arrows at both ends. This indicates that on the hypothesis in question values do not merely have determinants but are themselves determinants that to varying degrees affect changes in all four other domains.

No attempt is made at this point to defend such a general axiological orientation; but in this and the next two chapters modest explorations are made in the vast, unmapped value space. No laws are forthcoming, and certainly no total explanation of anything, but some significant problems are raised, and some light thrown upon some of them. The chapters in turn

direct attention to questions concerning the social, the psychological, and the biological determinants of the ratings of the Ways. The data available do not warrant a discussion of possible ecological determinants.<sup>2</sup>

## 2. INFLUENCE OF CULTURAL TRADITIONS

Perhaps the most striking fact about the means of the ratings of the thirteen Ways is the degree of their stability over the various regions of a given culture. The rank order of the means in various parts of the United States is much the same, and the same is in general also true for China and India. This suggests that the main determinant of the ratings is a social one, that modes of life deemed desirable by individuals are the modes of life approved in the culture to which they belong. So stated this may appear truistic. It seems obvious that if a society gave its greatest rewards to those who ran longest and farthest, most individuals would like to excel in running even if in fact individual capacities placed many of them at a disadvantage in the activity. Hence if we ask individuals how they would like to live, it seems natural to expect that the order of the means would reflect the value profile of the culture in which they live.

Now this is undoubtedly in some sense so; the question is in just what sense. The phrase "modes of life approved in the culture in which they belong" is not entirely clear. It may mean "operative in those persons with whom an individual has come into actual contact" or "approved in the symbolic expressions of the culture (such as art and literature) with which the individual is acquainted." While these two forms of approval may have much in common, they need not have, since operative values and conceived values need not be identical. It is possible that the differential ratings of the students correspond to an order of preference shown in the lives of persons they have met, to the order of approval shown in the symbolic expressions to which they have had access, or partly to one and partly to the other. If now the same hierarchy of approval were encountered by most individuals regardless of where they lived, there should

2. See Ellsworth Huntington's *Mainsprings of Civilization*, especially the material on the religions.

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be considerable similarity in the ratings of the Ways throughout the culture. In this sense the culture would be a determinant of both the operative and conceived values of the students and of the degree of harmony or conflict between these two sets of values.

Further, if certain individuals encountered persons whose preference orders for modes of life were different from the more common order, or symbolic expressions which in quantity and content weighted the alternatives differently from the symbolic expressions encountered by most individuals, their order of ranking the Ways should differ from the more common order. Such differences in contacts with persons and symbols might be due to variations in geographical regions of a culture, to life in the country versus life in the city, to class and economic status, or to all these at once. In these terms it might be possible to account for the fact that all individuals do not rank the Ways in the same order, and that some persons like best of all alternatives that in general are the least favored ones in the culture. Thus not only the similarities between individuals but also their differences would be explained in terms of social phenomena.

The extreme exponent of this position would maintain that culture in such a sense (the socially transmitted operative and conceived values) is the sole determinant of values or, in terms of this study, the sole determinant of the ratings of the Ways. This extreme position is partly questioned in this chapter and especially in the two next chapters. For the moment, however, the task is to look at the material of the preceding chapter in terms of the perspective of the social sciences. The central problem is to consider both the similarities and differences in the ratings of the Ways in the three major samples. Social factors may not tell the whole story of these matters, but certainly they will play an important part in any credible account that can be given.

One cannot go very far in explaining the data solely in terms of the cultural traditions of China, India, and the United States. It is true that there is a congruity in the samples between the preferences for certain alternatives and the cultural traditions,



The Chinese stress on Ways 3, 5, and 13 is certainly in character with the humanistic emphasis of Confucianism. The favor shown by the Indian students to Ways 1 and 10 repeats the stress upon responsible but detached action characteristic of ancient Hindu wisdom. The high place given to Way 7 in the United States matches the Western tradition of individual self-expression. The ancient traditions are clearly still at work, but this is only part of the story. Buddhism and Taoism are also Chinese traditions, though the Chinese sample would hardly give an inkling of that. Detachment is certainly less prominent and dominance more prominent in the Indian material than one would expect in terms of tradition alone. And the relatively low place of Way 3 in the American ratings shows that the sample does not adequately reflect the Christian facet of the Western traditions.

It is as if a selection were being made from the historical legacies and not a replication of them. While the selection is influenced in direction by the more dominant emphases in these legacies, not all individuals make the same selection. So if one is to do more justice to cultural traditions as determinants of value, it is necessary to look more closely at separate cultural strands. Differences between American religious groups and between the Brahman and other castes in India will serve to make the problem more concrete.

### 3. AMERICAN RELIGIOUS TRADITIONS

Religious traditions are one form of cultural embodiment and transmission of certain conceived cultural values. When students responding to the questionnaire in the United States were asked to state the religious affiliations of their parents, the question arose as to the degree to which these intracultural traditions are reflected in the ratings of the Ways. Table 22 presents the mean ratings for groups of students whose parents were identified with Protestantism, Judaism, or Catholicism, as well as groups of students whose parents were of different religious faiths or without religious affiliations. Since these groups are composed of both men and women, the means of the total United States mixed group, formed by averaging the sets of

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mean ratings of men and women given in Table 20, are included in Table 22.

The United States student profile is immediately recognizable in the means of all five groups: there is very little difference in the rank orders of the means. The variations in religious affiliation of the parents make little difference in the total ratings of the various student groups. Nor is the difference greater be-

TABLE 22  
MEAN RATINGS OF THE WAYS IN TERMS OF  
RELIGIOUS AFFILIATIONS OF PARENTS

Ways	Protestant (N=520)	Catholic (N=82)	Judaic (N=93)	Mixed (N=108)	None (N=89)	Total U.S. (N=2,846)
1.....	5.22	4.79	4.43	5.14	4.63	5.11
2.....	2.83	3.23	3.33	3.17	2.98	2.71
3.....	4.32	4.12	3.59	4.35	4.01	4.33
4.....	3.80	3.91	4.25	3.90	3.93	3.78
5.....	4.08	3.98	3.66	3.83	3.91	4.31
6.....	4.79	4.98	4.53	4.42	4.55	4.82
7.....	5.51	5.48	6.31	5.94	5.86	5.71
8.....	4.48	4.33	4.34	4.55	4.34	4.48
9.....	3.04	2.77	2.75	3.30	2.73	3.01
10.....	3.84	3.78	3.15	3.65	3.75	3.64
11.....	2.87	3.23	2.72	2.68	2.73	2.76
12.....	4.33	4.13	3.77	4.19	4.32	4.24
13.....	2.61	2.21	1.71	2.41	2.13	2.38
Total....	51.72	50.94	48.54	51.53	49.92	51.28
Mean....	3.98	3.92	3.73	3.96	3.84	3.94

tween the students whose parents had religious affiliations and those whose parents had none.

Nevertheless, some trends are noticeable. The largest deviation is in the Judaic sample: compared to the total sample its D of 1.88 is about twice as large as the D's of the other non-Protestant groups. Ways 1, 3, 5, 10, 12, and 13 are significantly lower, and Ways 2, 4, and 7 are significantly higher. These differences are due in part to the unusually low average ratings of the Ways in this sample by both men and women. The sample is small; but if it is to be trusted, it would be in line with the expectation that intracultural traditions have an effect proportionate to their difference (assuming that the two variations of

the Christian tradition differ less among themselves than they do from Judaism).

The significant differences of the means of the various groups from the total United States means are given in Tables 23. This table reveals an interesting tendency. All of the five special groups rate Way 5 lower than does the total sample and rate Way 2 higher. The members of the smaller intracultural groups seem to be somewhat less identified with the social system as a whole. The means in the Catholic, Judaic, and non-affiliated samples were lower for Ways 1, 3, 5, 8, 9, 11, 12, and

TABLE 23  
WAYS IN WHICH STUDENTS WHOSE PARENTS DIFFERED IN  
RELIGIOUS AFFILIATIONS DIFFERED IN RATINGS\*

Groups	Ways in Which Means Are Lower than in Total Sample	Ways in Which Means Are Higher than in Total Sample
Protestant.....	5, 7	10, 13
Catholic.....	(1), (5)	2, 11
Judaic.....	1, 3, 5, 10, 12, 13	2, 7
Mixed.....	5, 6	2
No religious affiliation.....	1, (3), 5, (6)	.....

\* Parentheses indicate near significance.

13 than the Protestant means, and higher in Ways 2 and 4. This suggests that these groups are somewhat lower in Factors A and D than the Protestant group. Factor A is also slightly higher in the Protestant group than in the total sample.<sup>3</sup>

Way 3, which embodies certain aspects of the Christian tradition, is higher in the Protestant and Catholic samples than in the other groups, except for groups whose parents had mixed religious affiliations. In China the ratings for Way 3 were slightly higher for students in Christian universities than for the country as a whole, but the ratings for Ways highly favored in China (Ways 5, 6, and 13) were almost identical in

3. The women in the Catholic sample had a markedly higher factor score on Factor A than did the men; this was not true of the Judaic sample or the group whose parents were without religious affiliation. In these last two groups the men and women were much alike, with the women somewhat lower than the men on Ways 2 and 12 and higher on Ways 3 and 7.

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the two groups. When the means of 119 Christian women in India were compared with the means of 291 non-Christian women, Way 3 was only slightly higher for the first group; the Christian women were, however, significantly higher on Way 13 and significantly lower on Ways 2, 4, 9, and 10.

Thus the characteristics of specific intracultural religious traditions play some part in influencing differentially the ratings of the Ways by the sons and daughters of the parents in these traditions, but the general value pattern of the students largely transcends the variations in religious affiliations of their parents. This is not to say that differences in religious convictions of the students themselves do not play a role in their ratings. No study was made of that relation; and if it were made, it would properly fall in the next chapter. The interest here has been in the relation of intracultural traditions to the general value pattern, not in the religious orientations of the individual student.

### 4. CASTE DIFFERENCES IN INDIA

A caste system builds social institutions around different modes of life. It combines cultural diversity with individual inflexibility: there are many castes, but one's beliefs, actions, and occupation are determined by the caste into which one is born. In India it was traditionally believed not merely that the caste system provided a functional way of meeting the various needs of society but that the castes corresponded to different types of personality and provided them with appropriate ways to live. In a very definite manner the caste was a cultural tradition that determined the values of its members. It would be of interest to know whether caste distinctions express themselves in the ratings of the Ways.

The data to be presented are not extensive enough to answer this question with certitude. Distinctions of caste are discounted at the level of higher education, and it was not possible to include questions about caste in the material distributed by the Indian Ministry of Education. But in the material personally collected it was possible to secure at times this information. The number of cases is too small to permit much differentiation; therefore remarks will be confined to the contrast of Brahmans

and non-Brahmans—with one reference to the Kshatriya caste. Table 24 shows the means of the Ways for twenty-nine Brahman men and twenty-nine non-Brahman men at Benares Hindu University. Because the two groups differed little in economic status or in the populations of the places where childhood was spent, the differences seem mainly a contrast in caste.

With such small numbers of cases, a difference of means of about .87 is necessary to be significant. By this criterion the Brahmans are significantly lower on Ways 6, 8, and 13. But

TABLE 24  
MEANS OF THE WAYS FOR MEMBERS OF  
BRAHMAN AND NON-BRAH-  
MAN CASTES

Way	Brahman	Non-Brahman
1.....	5.94	5.86
2.....	3.48	3.83
3.....	5.34	5.11
4.....	3.24	3.21
5.....	4.17	4.80
6.....	4.90	5.90
7.....	5.86	5.48
8.....	3.42	4.28
9.....	3.17	3.28
10.....	4.62	5.03
11.....	3.55	4.31
12.....	3.83	4.48
13.....	2.96	3.97
Mean.....	4.19	4.58

they are also considerably lower on Ways 2, 5, 10, 11, and 12 and higher on Way 7. They thus seem to be rejecting the extremes of dependence, dominance, and detachment and to favor Way 7, which involves the integration of these attitudes. The favor shown to Way 7 is more clearly brought out in the first choices. While this Way is in general liked by the Benares students, the Brahmans gave it 46 per cent of their first choices, in contrast to the 12.5 per cent first choices of the non-Brahmans.<sup>4</sup> Conversely, none of the Brahmans gave Way 5 or 6 a first choice, while 18 per cent of the non-Brahmans did.

4. This may help to explain the fact noted in chap. iii, sec. 3, that Way 7 was second in number of first choices in India while seventh in the rank order of the means.

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A somewhat larger sample confirms in the main these distinctions. When thirty-nine more Brahman men are added to the group of twenty-nine, and the means compared to the means of the total sample of 724 men (which contains an unknown number of Brahmans), the Brahman group is significantly higher in Way 7, and significantly lower in Ways 5 and 12; it is also noticeably lower on Ways 4, 6, 10, and 13.

The Brahmans are noticeably lower on Factor B and noticeably higher on Way 7 than the non-Brahmans. This accords with their traditional concern for the development of the person and the relinquishment of power. A small group of thirteen Kshatriyas (the warrior class of old) proved to be considerably higher on Factor B than the Brahmans or the India male sample as a whole. As to choice of future occupation, the Brahmans distinctly favored the professions of medicine, teaching, science, and journalism more than did the non-Brahmans and favored business, politics, and military service less.

We have here an instance of how intracultural traditions help to account for some portion of the differential ratings of the Ways within a culture.

### 5. A NEGRO SAMPLE

American Negroes constitute a minority group, not in virtue of being the carrier of a distinctive intracultural tradition, but because of the economic and social status assigned to them by those who aimed to create a Negro caste.

The Negro student of today accepts in general the value pattern of the total American student body, but the movement from caste status to citizenship shows itself in variations of emphasis within this pattern. For ease of comparison the mean ratings of the total United States sample of men are included with the mean ratings of the Ways by 110 men and 90 women at Howard University, as shown in Table 25.

In terms of the means given in Table 25, Ways 1, 3, 5, 6, and 10 are significantly higher for the Negro men than for the general male student population, and Ways 4, 8, and 9 significantly lower.<sup>5</sup> The Negro men are higher in both Factors A and B than

5. The D between the male Negro means and those of the total male sample is 1.70.

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the general population and lower in Factor E. These Negro students favor highly both Ways 1 and 6; they are, on the one hand, identifying strongly with the American tradition and, on the other, determined to improve their place in the social system.<sup>6</sup> The relatively high place of Way 10 is in marked contrast to the total United States sample; it indicates the severity and the uncertainty of the passage from caste to citizenship. It is somewhat lower for the Negro women. The differences be-

TABLE 25  
MEAN RATINGS OF THE WAYS BY NEGRO STUDENTS

Way	Women (N=90)	Way	Men (N=110)	Way	Total U.S. Men (N=2,015)
7. ....	5.81	6. ....	5.64	7. ....	5.58
6. ....	5.39	1. ....	5.53	1. ....	5.06
1. ....	5.26	7. ....	5.37	6. ....	4.88
5. ....	5.23	10. ....	4.87	8. ....	4.53
3. ....	4.39	5. ....	4.78	12. ....	4.41
12. ....	4.31	3. ....	4.57	5. ....	4.26
8. ....	4.26	12. ....	4.37	3. ....	4.22
10. ....	4.00	8. ....	4.12	10. ....	3.85
4. ....	3.76	4. ....	3.31	4. ....	3.74
9. ....	2.93	2. ....	2.62	9. ....	2.95
11. ....	2.71	11. ....	2.61	2. ....	2.81
2. ....	2.46	9. ....	2.53	11. ....	2.77
13. ....	2.26	13. ....	2.33	13. ....	2.23
Total...	52.77		52.65		51.29
Mean...	4.06		4.05		3.94

tween the ratings of Negro men and women follow closely the general variations noted in chapter iii, section 7.

### 6. ECONOMIC VARIATIONS IN THE UNITED STATES

A possible explanation of the relative stability of the ratings of the Ways in various geographic regions of a culture might be found in terms of economic status, the stability of the samples indicating the uniformity of the economic structure throughout the various areas of the culture. Though the hypothesis would explain much if it were true, the slight evidence

6. The ratings of Ways 1 and 6 are highly correlated for Negro men and uncorrelated in the general male student population.

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at hand is strongly against it. In the present section only the United States sample is considered.

The "Ways To Live" document contains the question, "To what income group did your parents belong in the community in which they lived?" A response is asked for in terms of five categories: upper, upper middle, middle middle, lower middle, lower (henceforth abbreviated as U, UM, MM, LM, L). The

TABLE 26  
MEAN RATINGS OF THE WAYS ACCORDING TO FIVE  
ECONOMIC STATUS GROUPS (UNITED STATES)\*

Way	Upper (N=48)	Way	Upper Middle (N=275)	Way	Middle Middle (N=326)	Way	Lower Middle (N=151)	Way	Lower (N=33)
7.....	5.91	7...	5.76	7...	5.63	7...	5.64	7...	5.61
1.....	5.28	1...	5.07	1...	5.08	1...	4.92	6...	4.97
6.....	4.63	6...	4.87	6...	4.61	6...	4.72	1...	4.54
12.....	4.54	8...	4.38	8...	4.58	8...	4.32	12...	4.36
8.....	4.40	12...	4.33	3...	4.21	3...	4.11	8...	4.24
3.....	4.26	3...	4.19	12...	4.20	12...	3.98	3...	4.04
10.....	4.07	4...	4.12	5...	4.09	4...	3.66	10...	3.94
4.....	4.05	5...	4.10	4...	3.81	5...	3.65	5...	3.85
5.....	3.88	10...	3.81	10...	3.60	10...	3.62	4...	3.79
11.....	3.30	9...	3.03	9...	3.05	2...	3.15	2...	3.09
2.....	3.19	2...	2.96	11...	2.85	11...	3.10	9...	2.78
9.....	3.07	11...	2.72	2...	2.81	9...	2.95	11...	2.73
13.....	2.81	13...	2.37	13...	2.46	13...	2.33	13...	2.06
Total.	53.39		51.71		50.98		50.15		50.00
Mean.	4.11		3.93		3.92		3.86		3.85

\* Not all subjects were used, but the percentages of persons in the various groups closely correspond to the percentages in the total sample.

responses furnish in a crude way some indication of the economic status of the parents relative to the particular community in which they lived, a status that might be expected to have affected the outlooks of the respondents.<sup>7</sup> But in terms of this criterion, for whatever it is worth, the economic status of the parents played little part in the students' ratings, as is evident from Table 26.

7. Economic status is in the United States a rough index of social status, but the two do not coincide, and they might diverge considerably in certain cultures. This is one reason why in sec. 4 a group of Brahmans was compared with a group of non-Brahmans of similar economic status.



The U and L groups are proportionately small, containing respectively about 5 and 4 per cent of the subjects. The UM group is almost twice as large as the LM group (about 33 per cent vs. 18 per cent). It is evident that the rank orders of the means are very much the same in the five groups and simply repeat the cultural pattern. There is obviously no over-all statistical significance in the differences of the means as a whole or between any two groups. But there are some specific variations that may be noticed.

Several of the Ways tend to decrease in favor with the decrease in economic status (such as Ways 1 and 13). There is, moreover, a progressive (but not statistically significant) decrease in the averages of the means of the five groups. This might indicate either that the five groups used the rating categories progressively in a more restrained manner or that "Ways To Live" is somewhat biased in the direction of the likings of those with higher economic status. If the former alternative is correct, it suggests that persons with higher economic status are in the United States somewhat less restrained and somewhat more tolerant of diversity than those of lower economic status. But the data themselves give no way of determining which alternative interpretation is correct.<sup>8</sup>

The only statistically significant contrast between the U and L groups lies in Ways 1 and 13, both of which are more favored by the U group. The UM group significantly likes Ways 4, 5, and 12 more than the LM group and Way 11 less. There is hardly any divergence between the UM and MM groups.

The average D is .95, which is much less than the D's between cultures. The differences in samples sizes may account for much of the apparent symmetry of Table 27. The interpretation of factor scores is made difficult by the decrease in average ratings of the groups from U to L, for decrease in the ratings means that the total factor scores of the groups decrease in the same manner. When this tendency is taken into account, only a few

8. In India the Ways as a whole are not differentially favored by the higher economic groups; in China the Ways as a whole are favored equally by the highest and lowest economic groups.

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factor scores reveal variations among the five economic status groups. The factor scores<sup>9</sup> are shown in Table 28.

A further check on the lack of any over-all statistical significance in the variations of the five groups was made in terms of the chi-square technique applied to first choices of the Ways—for it is possible that first choices might be more discriminatory than means. When first choices are grouped in terms of Cate-

TABLE 27  
D'S BETWEEN MEAN RATINGS OF THE WAYS AC-  
CORDING TO FIVE ECONOMIC STATUS GROUPS  
(UNITED STATES)

	U	UM	MM	LM
UM.....	.94	.....	.....	.....
MM.....	1.02	.57	.....	.....
LM.....	1.12	.91	.76	.....
L.....	1.39	.85	1.05	.92

TABLE 28  
FACTOR SCORES ACCORDING TO FIVE ECONOMIC  
STATUS GROUPS (UNITED STATES)

Factors	U	UM	MM	LM	L
A.....	1.77	1.59	1.62	1.62	1.56
B.....	4.40	4.40	4.28	4.08	4.38
C.....	.87	.59	.52	.87	.66
D.....	3.20	3.00	3.05	2.93	2.74
E.....	4.22	4.25	4.20	3.99	4.02
Av.....	2.89	2.77	2.73	2.70	2.67

gories I, II, and III, the cell entries are almost exactly what would be expected by chance. The same is about the case when the grouping is made in terms of factors; the only point of interest is that the UM group is lower on Factor A than would be expected and the MM group higher.

It would seem, then, that in the United States sample there

9. These factor scores, and those throughout the rest of the study, are computed on the basis of United States factor loadings of .30 and above or —.30 and below. Way 12 is given double weight on Factor B, and Ways 13 and 9 are given double weight on Factor D.

is little connection between the ratings of the Ways by students and their classification of the economic status of their parents. Certain trends and items of significance contribute to the differential ratings of the Ways, but the contribution is a small one.

Perhaps it ought to be noted again that nothing has been said concerning the variations in ratings by persons of different incomes.<sup>10</sup>

#### 7. POPULATION VARIATIONS IN THE UNITED STATES

Another possible source of both variation and stability in the ratings might lie in the size of the community in which the raters lived. To test this possibility the raters were asked to indicate the population of the place in which they spent their childhood. Four categories were used: over 500,000; between 500,000 and 100,000; between 100,000 and 25,000; less than 25,000. These are called respectively the P1, P2, P3, and P4 groups. The mean ratings of men and women students in the various population groups<sup>11</sup> are listed in Table 29.

The rank orders of the means in the various groups are practically identical. But the mean ratings show considerably more variation than in the case of the economic status groups. There is a slight tendency for the average ratings of the Ways to increase as the population size decreases—the reverse of the situation in the economic status groups. The variation is too small to be statistically significant, but it at least raises the

10. There is some slight evidence that the rater's own economic status does not play a great role in his ratings. Frank A. Weil states in a personal communication that in a sample of 69 persons, 32 of whom had an income of less than \$5,000 a year and 37 of whom had a larger income, only Way 2 showed a significant difference between the two groups (being favored more by the lower income group). It may be added that the sample was about equally divided between those who had attended college and those who had not. Way 7 was rated noticeably lower by the non-college persons, though not significantly so. Ways 8, 9, 12, and 13 were significantly higher in the non-college group. Those who gave their religion as Jewish differed considerably more from those who said that they were Protestants or Catholics than the latter differed from each other. The reported variations were in general similar to those given in sec. 3 of this chapter.

11. Not all subjects were used, nor do the percentages in the various groups agree closely with the percentages in the total sample. In the total sample the percentages in the four groups were respectively 25.7, 14.8, 30.6, 28.9.

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question whether there is a slightly greater enthusiasm and vitality in the students from the smaller communities.

Connected with this difference in average ratings is the tendency of the mean ratings of a number of Ways to increase as population size decreases (such as Ways 1, 3, 5, 6, 8, 10, and 13). Contrary to this tendency, however, Ways 2, 4, and 7 decrease in favor with decrease in population size. The greatest divergence is between the students coming from the very large cities (P1) and those from the other communities, especially

TABLE 29  
MEAN RATINGS OF THE WAYS ACCORDING TO POPULATION OF  
PLACE WHERE CHILDHOOD WAS SPENT (UNITED STATES)

Way	P1 (N=205)	Way	P2 (N=150)	Way	P3 (N=139)	Way	P4 (N=324)
7.....	5.94	7.....	5.67	7.....	5.63	7.....	5.60
1.....	4.58	1.....	4.97	1.....	5.10	1.....	5.26
6.....	4.51	6.....	4.74	6.....	4.80	6.....	4.79
8.....	4.28	8.....	4.31	8.....	4.34	8.....	4.60
12.....	4.09	12.....	4.28	3.....	4.16	3.....	4.43
4.....	4.07	3.....	4.09	12.....	4.05	12.....	4.36
3.....	3.82	4.....	4.05	5.....	3.81	5.....	4.21
5.....	3.67	5.....	4.03	10.....	3.81	10.....	3.87
10.....	3.39	10.....	3.85	4.....	3.76	4.....	3.74
2.....	3.17	9.....	2.99	9.....	3.02	9.....	2.97
11.....	2.93	2.....	2.90	2.....	2.91	11.....	2.90
9.....	2.89	11.....	2.67	11.....	2.83	2.....	2.82
13.....	2.04	13.....	2.43	13.....	2.52	13.....	2.52
Total..	49.38		50.98		50.74		52.07
Mean..	3.79		3.92		3.90		4.01

from P4.<sup>12</sup> When the means of P1 and P4 are compared, P1 is significantly different from P4 on all Ways except 9, 11, and 12; it is higher on Ways 2, 4, and 7 and lower on Ways 1, 3, 5, 6, 8, 10, and 13. If the average ratings of the groups are equalized, the relations between P1 and P4 remain the same on Ways 1-5 and 7. The direction is the same on Ways 6, 10, and 13 but not on Way 8. We have here an important source of intracultural variations in the United States ratings. The ratings in P1 are significantly lower than the ratings in the other three groups

12. The average D of P1 to the other groups is 1.20, whereas the average D between the other three groups is .63.

on Ways 1 and 10 and noticeably lower on Way 3; they are also noticeably higher on Way 7. Ways 1, 3, and 10, however, define Factor A. In the large cities, therefore, less stress upon social restraint and self-control and more orientation to the self are indicated. The picture can be sharpened by recourse to the factor scores for the four population groups, as shown in Table 30.

TABLE 30  
FACTOR SCORES FOR FOUR POPULATION GROUPS  
(UNITED STATES)

Factor	P1	P2	P3	P4
A.....	1.30	1.59	1.72	1.80
B.....	4.09	4.33	4.18	4.43
C.....	.81	.51	.64	.50
D.....	2.74	2.99	3.05	3.08
E.....	4.18	4.18	4.05	4.17
Av...	2.62	2.72	2.73	2.80

As in the case of the economic status groups, the variations in average ratings of the population groups cause some uncertainty of interpretation. The variations, however, between the scores of P1 and those of other groups for the most part transcend the differences in average ratings. Factor A for P1 is seen to be markedly lower and Factor C somewhat higher than the scores of the other groups—as one would expect in terms of the previous discussion. But the scores for Factors B and D are also somewhat lower. Thus the big-city group is not only less conservative than the other groups but also less active and less receptive.

One other point comes out in a check on the analysis in terms of first choices of the Ways grouped according to factors. As one would expect, most of the findings in terms of the means reappear. But there is one apparent contradiction: in terms of first choices P1 no longer differs significantly from the other populations with respect to Factor A.<sup>13</sup> The disparity between

13. The total chi square is 20.94. For 12 degrees of freedom this reaches the .06 level of significance, so that one might claim an over-all statistical significance for the population groups. But in fact this result is largely due to the contribution of P1, which accounts for 12.95 of the total chi square.

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means and first choices suggests that there must be some subgroups within P1 who strongly favor the Ways defining Factor A and thus bring the number of first choices proportionately higher than the means. Previous data give an indication as to who these big-city people might be. Table 26 shows that Ways 1, 3, and 10, defining Factor A, are all favored most by the high-income group, and Table 22 shows also that these Ways (with one slight exception in the case of Way 3) are favored most by those whose parents are members of the Protestant tradition.

The relations between the population groups in terms of D's are shown in Table 31. The general symmetry is evident: as

TABLE 31  
D'S BETWEEN MEAN RATINGS OF THE  
WAYS ACCORDING TO FOUR POPULA-  
TION GROUPS (UNITED STATES)

	P1	P2	P3
P2.....	1.02	.....	.....
P3.....	1.10	.50	.....
P4.....	1.48	.71	.67

the distances between the populations increase, the D's of their value patterns tend to do the same. The size of the samples insures that this symmetry is not an artifact caused by differences in sample sizes.

Table 32 gives some indication of the relation of the population and economic groups. The means of the population groups were equalized so that each group had the same average rating for the Ways; the same was done for the economic groups. Table 32 shows the location of the highest means and the lowest means; thus the highest means for Way 7 and the lowest means for Ways 3, 5, and 6 are in U and P1.

If the upper and lower groups of each category are combined, certain differences are more discernible. MM is grouped with LM and L in the combination of categories shown in Table 33. The Ways whose means are highest in P3-P4 are more socially oriented (stressing person-to-person relations) than those whose means are highest in P1-P2. The major opposition is be-

tween the high economic and large population cell and the low economic and small population cell. Ways representing Factors B and C are more favored in the lower economic groups, and separate roughly according to the populations. The higher economic groups also vary according to population size, those in

TABLE 32  
HIGHEST AND LOWEST UNITED STATES MEANS FOR THE  
WAYS ACCORDING TO POPULATION AND  
ECONOMIC STATUS GROUPS

P's	U	UM	MM	LM	L
P1 { High . . . . .	7	4	.....	2, 11	.....
Low . . . . .	3, 5, 6	.....	10	.....	1, 13
P2 { High . . . . .	.....	.....	.....	.....	10, 12
Low . . . . .	8	11	.....	.....	.....
P3 { High . . . . .	13	.....	9	.....	6
Low . . . . .	.....	.....	.....	12	.....
P4 { High . . . . .	1	.....	3, 5, 8	.....	.....
Low . . . . .	.....	.....	2, 7	4	9

TABLE 33  
GROUPING OF HIGHEST AND LOWEST UNITED STATES  
MEANS ACCORDING TO POPULATION AND ECO-  
NOMIC STATUS GROUPS

P's	U and UM	MM, LM, and L
P1 and P2: Highest means . . .	4, 7	2, 10, 11, 12
Lowest means . . .	3, 5, 6, 8, 11	1, 10, 13
P3 and P4: Highest means . . .	1, 13	3, 5, 6, 8, 9
Lowest means . . .	.....	2, 4, 7, 9, 12

the larger cities being more oriented to self, those in the smaller population units being more socially oriented. The differences in means are often very small, but they at least show that to some extent the ratings of the Ways vary in strength in the United States in different economic and population groups even

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though the general value pattern of United States students is much the same in all of them.<sup>14</sup>

### 8. CHINESE ECONOMIC AND POPULATION DATA

The same kind of analysis that was made of the United States data was also applied to the Chinese material. There is no need, however, to present the entire results in tabular form, since the differential rating of the Ways according to economic status and population size is less than in the United States. It is sufficient to call attention to the similarities and divergencies between the two analyses, beginning with the economic status groupings.

Whereas the UM group in the United States was about twice the size of the LM group, the reverse is true of the China sample. The L group is also about twice as large in the China sample. Thus the Chinese economic distribution is skewed toward the lower statuses. If persons in these lower statuses show a preference for certain Ways over others, their choice would throw light upon some of the ratings in the total China sample.

The average D between the five groups is 1.29. The U group on the average differs more from the other groups than the other groups do from each other (as in the United States). The L group in China contrasts considerably with the United States L group. Thus while the other Chinese groups progressively decline in average rating (as in the United States), the L group average rating is about as high as the average rating of the U group. While the means of the other groups progressively decline on Ways 1 and 7 (as in the United States), those of group L take a sharp rise above the figures for group LM. In terms

14. This suggests that "Ways To Live" is a suitable instrument for studying both the value pattern distinctive of a culture and the intracultural variations within that pattern. It thus provides help in determining the existence of a culture and the degree of its homogeneity. Bernard A. Thorsell undertook to show statistically that the first seven Ways (he studied no others) could not be regarded as expressing only special groups (political, economic, religious, and the like) within American society and that these Ways therefore furnished a possible instrument for studying the ethos of a culture via its common value-orientations ("An Empirical Analysis of American Group Character" [Master's thesis, University of Illinois, 1955]). The present study finds more intracultural variations than he, using simpler methods, did; however it extends his general thesis to the "Ways To Live" instrument as a whole.



of D's, group L is farther from group LM than from any other group. No difference of means between the L and U groups is statistically significant, although group L is noticeably higher on Ways 2 and 11 and lower on Ways 4 and 7. This behavior of group L is evidence that valuing in terms of economic groups is not a fixed thing but varies with cultures and with situations.

Another dissimilarity is found in the LM group. In the United States this group had no distinctive characteristics: in terms of the number of first choices there was practically no discrepancy between what was found and what was expected by chance. But in the Chinese LM group the variation of first choices (grouped by factors) has an over-all statistical significance. It is weaker on the Factor C and Factor E groupings than expected and much stronger on the Factor B grouping.

On the whole, however, economic status of parents plays only a modest part in the Chinese ratings. Apparently in the revolutionary situation such variations in status were largely overridden by other considerations—at least as far as the students were concerned. This is also true of the population groups in China and, as described later, of the somatotype groups as well.

As the Chinese population groups become smaller, the average group rating becomes smaller—the reverse of the United States situation. This complicates comparison, for certain Ways that tend to decrease in favor as the population groups become smaller (such as Ways 1, 3, and 6) tend to increase in the United States under such conditions, and it is hard to assess the importance of such variations.

In terms of means, the average D between the four population groups is 1.19. P1 is significantly higher than P2 on Ways 4 and 8 and lower on Way 10; significantly higher than P3 on Ways 4 and 8; and significantly higher than P4 on Ways 1, 7, 8, and 12. In the United States sample, however, P1 was significantly lower than P4 on Ways 1 and 8, though higher on Way 7.

It is thus apparent that the large city in China does not play the same role that it does in the United States. The D between P1 and P4 is almost the same as the D between P1 and P2. The Chinese big city is not as low on either Factor A or Factor B

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as is the American metropolis. And while Way 7 in China is most favored in the big city, its appeal is not as strong. The Chinese students from the big city are not as oriented toward themselves as are the corresponding American students.

Since the differences in average ratings of the population groups are not statistically significant, a correction made the

TABLE 34  
HIGHEST AND LOWEST CHINA MEANS FOR THE WAYS ACCORD-  
ING TO POPULATION AND ECONOMIC STATUS GROUPS

P's	U	UM	MM	LM	L
P1 { High.....	7, 8	1, 9	.....	.....	5
Low.....	13	10	.....	.....	.....
P2 { High.....	10	12	6	3	.....
Low.....	2	.....	8	4, 9	.....
P3 { High.....	4	11	13	2	.....
Low.....	6	.....	.....	7	.....
P4 { High.....	.....	.....	.....	2, 5	.....
Low.....	3, 11	.....	12	.....	1

TABLE 35  
HIGHEST AND LOWEST CHINA MEANS ACCORDING TO POPU-  
LATION AND ECONOMIC STATUS GROUPS

P's	U and UM	MM, LM, and L
P1 and P2:		
Highest means.....	1, 7, 8, 9, 10, 12	3, 6
Lowest means.....	2, 10, 13	4, 5, 8, 9
P3 and P4:		
Highest means.....	4, 11	2, 5, 13
Lowest means.....	3, 6, 11	1, 7, 12

average ratings the same. This was also done for the economic groups. The highest and lowest means, with entries in two cells where means for the same Way are equal, are shown in Table 34.

It is useful, as in the United States analysis, to combine the upper and lower groups in each category, as is done in Table 35. A comparison of Table 35 with Table 33 indicates that in

both China and the United States Ways 7, 10, 11, and 12 have the highest means in the larger populations and Ways 5, 8, and 13 the lowest means in those populations; the highest means for Ways 5 and 13 are found in the smaller population groups, and the lowest means for Ways 7 and 12 are found in those groups.

When a similar comparison of China and the United States is made in terms of economic groups, the upper income groups in both cases give the highest means to Ways 1, 4, and 7 and the lowest means to Ways 3, 6, and 11; the lower income groups give the highest means to Ways 2, 3, 5, and 6 and the lowest means to Ways 1, 4, 7, 9, and 12. Since the two samples diverge appreciably in the distribution of the economic groups (87 per cent of the Chinese students being in the three lower groups, in contrast to 62 per cent of the American students), and since in both countries the two upper income groups favor Ways 1, 4, and 7 while the three lower income groups favor Ways 3, 5, and 6, some light is thrown upon the variations in the total China and United States samples. Ways 1, 4, and 7 are rated higher in the United States than in the China sample, and Ways 3, 5, and 6 rated lower (Tables 2 and 8).

#### 9. INDIAN ECONOMIC AND POPULATION DATA

In the India sample, as in the United States and China samples, neither economic nor population groups show an overall statistically significant relation to the ratings of the Ways. While there are larger variations in the groups than in China, the variations are in some respects in opposite directions.

The India, like the China sample, is skewed in distribution toward the lower economic groups; unlike the China sample it is skewed toward the smaller population units. Unlike both China and the United States, the average ratings of the Indian economic groups tend to increase with the lowering of economic status.

The average D between the economic groups is 1.71, as contrasted to .95 in the United States and 1.29 in China. This suggests that economic differences play a larger role in India. With respect to means, U is significantly higher than L on Way 7

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and lower on Ways 2, 12, and 13. L shows no such distinctive features as it did in China; it does not diverge much from LM. The UM group is significantly higher than LM on Way 7 and lower on Ways 3, 5, 10, and 13. The largest number of significant differences is between MM and LM, LM being higher on Ways 3, 5, 10, 12, and 13 and lower on Way 7. MM has the highest mean for Way 7, though it is only slightly higher than that of UM. Way 7 is distinctly lower in LM and L than in the other economic groups.

In terms of first choices, grouped according to factors, only the LM group approaches significance ( $p < .10$ ). It is higher on the groupings by Factors B and D and lower on the grouping by Factor C than would be expected by chance; thus it shows considerable similarity to the ML group in China.

The variations in factor scores for the five groups are not large. But the scores for LM and L on Factors A, B, and D are noticeably higher than for the other groups even if the general increase in average ratings for the lower economic groups is taken into account. While in the United States the upper income groups tend to be most conservative (in the sense of Factor A), in India it is the lower income groups that take this position.

With respect to the four Indian population groups, the average D is 1.09 (in the United States it was .91, and in China 1.19). The big city in India (as in China) does not stand out differentially the way it did in the United States: the average D of P1 from the other groups is less than the average D among these groups, whereas in the United States it was about twice as large. Nor is the relation of P1 to the other groups the same. In terms of means, Ways 5, 10, and 12 are significantly higher in P1 than in P4, and Way 7 is significantly lower—a situation quite the reverse of the United States. The highest and lowest means, with entries in two cells where means for the same Way are equal, are shown in Table 36. The upper and lower groups in each category are combined in Table 37.

It appears that the Indian P1-P2 is not as self-oriented as the United States groups, although the preference for person-to-person Ways is still less than in P3-P4. P1-P2 is higher on Ways

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strong in Factors A and B than is P3-P4 and lower on Ways strong in Factors C and D. The U and UM groups are less strong than the other economic groups on Ways which define Factors C and D. As in the case of China and the United States, the strongest contrast is between the upper economic groups in the larger cities and the lower economic groups in the smaller population centers.

TABLE 36

HIGHEST AND LOWEST INDIA MEANS FOR THE WAYS ACCORDING TO POPULATION AND ECONOMIC STATUS GROUPS

P's	U	UM	MM	LM	L
P1 { High . . . . .	10	12	.....	.....	12
Low . . . . .	.....	1, 9	.....	2, 6	7, 11
P2 { High . . . . .	4	6	1	.....	1
Low . . . . .	.....	3	.....	.....	8, 11
P3 { High . . . . .	.....	.....	8, 9, 11	3, 5, 13	2
Low . . . . .	.....	10	.....	.....	.....
P4 { High . . . . .	.....	.....	7	.....	.....
Low . . . . .	12, 13	.....	4, 5	.....	.....

TABLE 37

HIGHEST AND LOWEST INDIA MEANS ACCORDING TO POPULATION AND ECONOMIC STATUS GROUPS

P's	U and UM	MM, LM, and L
P1 and P2:		
Highest means . . .	4, 6, 10, 12	1, 12
Lowest means . . .	1, 3, 9	2, 6, 7, 8, 11
P3 and P4:		
Highest means . . .	.....	2, 3, 5, 7, 8, 9, 11, 13
Lowest means . . .	10, 12, 13	4, 5

## 10. FINAL REMARKS ON ECONOMIC AND POPULATION GROUPS

In terms of the preceding analyses it seems safe to conclude that membership in different economic and population groups has some differential effect on the rating of the Ways but provides no primary basis for an explanation of the intercultural and intracultural variations. Nor is the nature of the effect con-

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stant in the three samples. There are some cross-cultural tendencies to be sure: Ways 2, 3, and 5 tend to be favored by the lower economic groups, and Ways 4 and 7 not to be so favored; Ways 10 and 12 tend to be favored more by persons in the larger population groups, Ways 5 and 13 by persons in the smaller ones. But the divergencies are often small, and such Ways as 1, 6, 8, and 9 wander back and forth across group boundaries.

There is, however, one important matter that has been mentioned but not yet seriously evaluated: the variations in the three samples with respect to the size of the various groups. The percentages of the total samples found in certain group combinations are shown in Table 38.

TABLE 38  
PERCENTAGES OF MEMBERSHIP IN COMBINED ECONOMIC AND POPULATION GROUPS IN THE UNITED STATES, INDIA, AND CHINA

Combinations	United States	India	China
U and UM.....	37.7	21.3	12.8
MM, LM, and L....	62.3	78.7	87.2
P1 and P2.....	40.5	26.2	61.9
P3 and P4.....	59.5	73.8	38.1

The differences are considerable. The China and India samples are noticeably more skewed to the three lower economic groups than is the American sample, and the representation from the larger population centers is much greater in China than it is in India.

If Ways 4 and 7 tend not to be favored by the lower economic groups, if Ways 2, 3, and 5 tend to be favored by them most, and if the India and China samples have a greater proportion of persons in these groups than does the United States sample, one would expect Ways 4 and 7 to be rated lower and Ways 2, 3, and 5 to be rated higher in India and China than in the United States. A reference to Table 2 will show that this is for the most part the case: only in the rating of Way 4 in India is there a minor exception. But this line of reasoning would not

explain why Way 10 is so much higher in India than in the United States, since the economic groups which most favor Way 10 in India are proportionately much smaller in membership than the groups which most favor Way 10 in the United States.

Similarly, one might argue that Ways 2 and 11 are rated higher in India because the groups that most favor them (lower economic and small population groups) have proportionately more members in the sample than do the groups which favor these Ways in China and the United States. By analogous reasoning, however, if Ways 10 and 12 are more favored by persons in the larger population centers and Ways 5 and 13 more favored by persons in the smaller population centers, Ways 10 and 12 should be rated higher in China than in India and Ways 5 and 13 rated lower. Table 2 shows that just the reverse is the case.

The differential ratings of the Ways by the various economic and population groups cannot be ignored, nor the differential sizes of these groups, but differences in conceptions of the good life in China, India, and the United States greatly override the variations.

#### 11. SOCIAL ROLES AND IMMEDIATE SITUATIONS

Two further social determinants of values receive only brief mention, for they have not been explored in this study: differentiations of value related to the performance of certain roles in the social system, and differentiations of value related to the press of an immediate problem upon the group.

The university student is of course acting in a social role. In this sense this study has been concerned with valuations of persons in a single role and not with cultures as a whole. Except in the most cursory manner, no attempt has been made in the present investigation to study the value patterns embodied in other social roles. Some of my students making sorties in this direction have come upon striking variations from the general pattern. Thus in one fundamentalist Bible college 46 per cent of the male students gave Way 13 as their first choice, as contrasted to 1 per cent of the general male student population. A

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group of 18 young Americans seriously and permanently ill gave Way 7 a mean rating of only 3.12, while Ways 5 and 6 were given mean ratings of 5.06 and 5.12.

An investigation of the value patterns of various occupational groups would be an important extension and supplementation of the present study. It would not only give further information on the differential rating of the Ways within a society but, if properly conceived, would provide insight into basic problems, such as the supportive and conflictive relations between the values required in social roles and the requirements of the personality systems of those attempting to fill such roles.

More relevant to the present inquiry is the question of the influence of the immediate social situations in the United States, India, and China upon the differential ratings of the Ways in the three major samples. The immediate situations at the time the ratings were obtained were certainly diverse enough.

India had recently gained independence and, while free to rejoice in its own traditions, faced many difficult social problems. Hence one would expect that, along with an emphasis upon tradition (Way 1), Way 6 would be rated high, and indeed it was.

In China a student could hardly miss the sense of great forces sweeping him along. It was not a time in which passivity or detachment was socially appropriate. The high favor shown to Ways 3, 5, and 13 matched well the actual situation.

By contrast, the United States had engaged in war without serious loss. Its people had not yet deeply sensed the problems and responsibilities of their new international position. It was possible to be interested in the rich resources of the self, to enjoy life openly. There was little need for stoicism, withdrawal, or basic social reconstruction, or for bending the knee before social or cosmic forces.

Analogous interpretations could be given for Japan and Norway. In my opinion such interpretations in terms of the immediate situation are plausible but not complete. The situation sets limits to the range of appropriate responses. If the problem to be faced is severe and widespread, the range of



appropriate responses may be very narrow indeed, and the non-situational determinants play a much reduced role in valuation. The analysis of the China data shows that the revolutionary situation did in fact go far in that direction. Nevertheless, even in these extreme circumstances not everyone reacted to the situation in the same way, and economic and population group differences, though weakened, were not obliterated. An immediate situation may be so drastic as to compel a radical shift in the value pattern of a group, but rarely is this the case. Certainly so far as general theory is concerned, the immediate situation is only one among the many determinants of value.

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### 1. SCOPE OF CHAPTER

In each of the large cultures sampled for this study, individual respondents varied widely in their liking for one Way or set of Ways over against the rest: even the most commonly liked Ways are disliked by some persons in each culture, and some persons in each culture like the Ways most commonly disliked. The social determinants discussed in chapter iv account for a portion of the variation but by no means for all of it. The same data are considered in the present chapter in psychological terms and examined in chapter vi for any significant variations in ratings at the biological level.

It is not necessary for present purposes to define the term 'psychological': it refers in this context to the personality system—to the temperament, character, and beliefs of persons. Neither the whole domain of the psychological determinants of value nor the way in which values themselves become determinants of other characteristics of the personality are under consideration here.<sup>1</sup> The aim is more modest, namely, to investigate in a preliminary manner whether ratings of the Ways vary with a few selected personality differences. The main instruments used for this purpose are the *Thurstone Temperament Schedule* and the *Cattell 16 Personality Factor Test*. More informally, comparisons are made with the psychological categories of Sheldon, Riesman, Horney, and Fromm. Concluding refer-

1. For a recent survey of studies of such topics see William F. Dukes, "Psychological Studies of Values," *Psychological Bulletin*, LII (1955), 24-50.

ence is made to the six value categories embodied in the Allport-Vernon *Study of Values*.<sup>2</sup>

A central purpose of the presentation is to show that there is a certain correspondence between psychological traits and preference for some of the Ways more than others, although the value dimensions are not simply psychological categories. In this way operative values enter for the first time into the account, and their relation to conceived values, with which we are mainly concerned, becomes investigable.

## 2. TEMPERAMENT AND VALUE FACTORS

The *Thurstone Temperament Schedule* tests seven temperament traits obtained by factor analysis from a large number of items found in various personality inventories.<sup>3</sup> The seven traits are therefore factors and can be conveniently compared with the value factors. The traits are, according to Thurstone, "relatively permanent personality characteristics" which describe "how normal, well adjusted people differ from each other." The score on each factor is determined by the answers given to the twenty items on the schedule which define the factor. Since these items indicate preferences for modes of behavior or for objects, the test may be regarded as giving a sample of the operative values of the persons tested.

The seven traits tested are labeled Active, Vigorous, Impulsive, Dominant, Stable, Sociable, and Reflective, labels that more or less characterize the content of the traits sufficiently for our purpose. It may be noted, however, that the items under "Dominant" stress social leadership rather than power as such, that "Stable" indicates emotional stability and not necessarily absence of maladjustment, and that "Sociable" refers to participation in interpersonal relationships and not to a moral orientation toward society.

Table 39 shows the significant correlations of the tempera-

2. Cf. chap. viii below for a short study of philosophic beliefs in relation to the ratings of the Ways, a study supplementing the present chapter.

3. The *Schedule* and the *Examiner Manual* are published by Science Research Associates, Inc., 57 West Grand Avenue, Chicago.

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ment factors and the Ways,<sup>4</sup> and Table 40 the significant correlations of the temperament factors and the value factors. A single '+' or '-' indicates a positive or negative correlation significant at the .05 level; a double entry indicates significance at the .01 level.

TABLE 39  
CORRELATIONS BETWEEN RATINGS OF THE WAYS AND CORRECTED SCORES  
ON THURSTONE TEMPERAMENT VARIABLES (N=115 MEN)

Way	Active	Vigorous	Impulsive	Dominant	Stable	Sociable	Reflective
1.....							
2.....		--	-	-		--	++
3.....							
4.....							
5.....		++	++	++		++	--
6.....		+	++				
7.....			--	-		-	+
8.....		+	++			+	
9.....		--	--	--		-	
10.....							
11.....		--	--			-	++
12.....		++	++	+		+	
13.....							--

TABLE 40  
CORRELATIONS BETWEEN TEMPERAMENT FACTOR SCORES  
AND VALUE FACTOR SCORES (N=115 MEN)

Value Factor	Active	Vigorous	Impulsive	Dominant	Stable	Sociable	Reflective
A.....							
B.....		++	++	++		++	
C.....		--	--	--		--	++
D.....		-		-			
E.....							

It is noteworthy that Ways 1, 10, 3, and -4, which define Factor A, have no significant relation to any of the seven tem-

4. For the numerical value of the correlations, and a number of technical elaborations not included in this section, see the paper by Lyle V. Jones and the author, "Relations of Temperament to the Choice of Values," to appear in the *Journal of Abnormal and Social Psychology*, late 1956 or early 1957. In the procedure there used, loadings of the value factors on the Thurstone temperament variables were computed. Consideration of the resulting matrix as an addition of seven rows to the factor matrix as determined by the Ways indicated no change in the value factors as determined from the Ways alone.

perament factors, and thus Factor A cannot be equated with the Thurstone temperament factors singly or in combination. This is also true of Factor E, represented by Ways 4 and 8. Conversely, neither of the temperament traits Active or Stable shows any significant relation to the value factors.

Ways 2, 5, 7, 9, 11, and 12, however, show significant correlations with at least four of the Thurstone temperament factors. Table 40 makes clear that the strongest contrast is between Factor B and Factor C. Persons who like Ways high in Factor B tend to be Vigorous, Impulsive, Dominant, and Sociable, while persons who like Ways high in Factor C tend to be low on just these traits and high on Reflective. Factor D does not stand out so clearly in these terms: it is nearer to Factor C than to Factor B, but unlike Factor C it is not high on Reflective and low on Sociable.

Since none of the correlations are very high, the value dimensions cannot be identified with any of the temperament factors. Persons of widely different temperaments (as defined by the *Thurstone Schedule*) can agree on such conceptions of the good life as are represented by Ways high in Factors A and E. There are, nevertheless, important relations between temperament factors and certain value dimensions, as shown in the case of Factors B and C, and to a lesser extent by Factor D. Hence, in so far as temperament traits are indications of operative values, there is a congruence between operative values and certain of the value dimensions. Temperamental differences between individuals are clearly one important source of the differential ratings of the Ways.<sup>5</sup>

### 3. CHARACTER AND VALUE DIMENSIONS

The *Thurstone Temperament Schedule* is by intent broad in coverage of the personality but limited in the number and com-

5. It is theoretically possible that the value dimensions might correspond to second-order temperament factors rather than to primary factors, but at least with respect to the Thurstone factors this is not the case. Lyle Jones found in the Thurstone material only two second-order factors, one with high loadings on Sociable, Dominant, and Impulsive and one with high loadings on Active, Vigorous, and Impulsive. These two second-order factors showed no differentiation (expressed in correlations) with respect either to the individual Ways or to the value factors.

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plexity of the traits which it explores. To use a distinction that Thurstone does not make, the schedule is more concerned with temperament than with character, 'character' for purposes of the distinction meaning "the relatively stable patterns of motivations and behavior which a person assumes in the course of his life-history in the physical and social world." Thus "kindliness or cruelty, niggardliness or generosity, conceit or self-depreciation, anxiety or self-confidence, productiveness or neurosis . . . are all traits of character."<sup>6</sup> Such traits are acquired in the course of a complex process of social interaction. Since various conceptions of the good life enter into this process, and since the resulting character embodies in itself a set of conceived values, it is possible that some of the value dimensions are more closely related to differences in character than to differences in temperament.

Unfortunately, the data available do not permit a clear-cut exhibition of this relation. It is of some interest, however, to consider material obtained from forty-seven students who rated the Ways and were scored on the *16 Personality Factor Test*, devised by Raymond B. Cattell.

The Cattell test measures both temperament and character traits, and from the contents of the 16 items it seems that character traits are considerably more prominent than in the Thurstone instrument.<sup>7</sup> The identifying letters and contents of the factors are as follows:

- A. Cyclothymia *vs.* schizothymia
- B. General intelligence *vs.* mental defect
- C. Emotional stability (or ego strength) *vs.* dissatisfied emotionality
- E. Dominance (or ascendancy) *vs.* submission
- F. Surgency *vs.* desurgency (or depressive anxiety)
- G. Character (or super-ego strength) *vs.* lack of internal standards

6. *The Open Self*, p. 135. On the contrast of temperament and character, see Erich Fromm, *Man for Himself*, pp. 50-61. Perhaps it is possible to regard temperament and character traits as falling along a continuum, the place of the trait being determined by the degree of correlation of that trait with bodily characteristics.

7. *Test and Manual* are obtainable from the Institute for Personality and Ability Testing, 1608 Coronado Drive, Champaign, Illinois. There are two forms of the test, A and B. Form A was used in this study. Reference to the *Manual* is necessary for a fuller grasp of the content of the 16 factors.

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- H. Adventurous autonomic resilience *vs.* inherent withdrawn schizothymia
- I. Emotional sensitivity *vs.* phlegmatic
- L. Paranoid schizothymia *vs.* trustful altruism
- M. Hysteric unconcern *vs.* practical concernedness
- N. Sophistication *vs.* rough simplicity
- O. Anxious insecurity *vs.* placid self-confidence
- Q1. Radicalism *vs.* conservatism
- Q2. Independent self-sufficiency *vs.* lack of resolution
- Q3. Will control and character stability
- Q4. Nervous tension

On each of these personality factors, the highest and lowest sixteen subjects were compared by Lyle Jones in terms of their scores on the Ways and on each of the value factors. The number of statistically significant mean differences between the highest and lowest groups of subjects, both for the Ways and the value factors, did not exceed what would be expected by chance. Hence it seems certain that the values represented by the Ways and by the value factors do not find a one-to-one reflection in the Cattell factors.

The data, however, may be looked at in a more informal way as a possible source of hypotheses rather than as support for specific conclusions. Even if there are few significant relations between the individual personality factors and the scores on individual Ways and single value factors, it would be surprising if the Ways and the value factors had no relation at all to various patterns of the personality factors. And, indeed, some such relations are suggested, though only further research could confirm or disconfirm their stability.

It will be recalled that value dimension A (social restraint and self-control) showed no significant relation to the Thurstone temperament variables; in the next chapter the same result will be found to hold with respect to somatotype differences. This suggests that Factor A is perhaps connected with character differences. Consideration of Factor A in terms of the Cattell Factor G (the "character or super-ego" factor) gives some support to this hypothesis. When the fifteen subjects highest on this variable are compared to the fifteen lowest subjects, it turns out that Ways 1, 10, and 3, which define in positive terms value dimension A, are all favored more by the group high in Cattell

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Factor G.<sup>8</sup> That Factor A is related to character more than to temperament is also indicated in the increase of factor scores on Factor A with increase of age (see Table 44).

The patterning of the Cattell psychological categories in relation to the Ways can be seen in Table 41. In the construction of this table, means on each Cattell factor were computed for those who most liked a given Way.<sup>9</sup> This was done for every Way. The two highest of the resulting thirteen means are indicated by '+', and the two lowest means by '-'. Thus in row A persons liking Ways 10 and 11 had the highest mean scores on Cattell Factor A, and persons liking Ways 5 and 8 had the lowest mean scores.

TABLE 41  
RELATIONS BETWEEN HIGH AND LOW MEAN SCORES ON THE  
CATTELL FACTORS AND LIKING OF THE WAYS

CATTELL FACTOR	Way												
	1	2	3	4	5	6	7	8	9	10	11	12	13
A.....	.....	.....	.....	.....	-	.....	.....	-	.....	+	+	.....	.....
C.....	+	-	-	.....	.....	.....	.....	.....	.....	.....	.....	+	.....
E.....	.....	.....	.....	.....	.....	.....	-	.....	.....	-	+	+	.....
F.....	.....	.....	.....	+	+	.....	.....	.....	.....	-	.....	.....	-
G.....	.....	-	.....	-	.....	.....	.....	.....	.....	.....	+	.....	+
H.....	.....	-	-	.....	.....	.....	.....	+	.....	+	.....	.....	.....
I.....	.....	.....	.....	.....	.....	.....	.....	-	+	.....	+	-	.....
L.....	.....	.....	+	-	.....	+	.....	.....	.....	-	.....	.....	.....
M.....	.....	+	.....	.....	+	.....	.....	.....	.....	.....	.....	-	-
N.....	.....	.....	+	-	.....	.....	.....	-	.....	.....	.....	+	.....
O.....	.....	+	.....	-	.....	.....	+	.....	.....	.....	.....	-	.....
Q1.....	.....	.....	.....	.....	.....	.....	+	.....	.....	+	-	-	.....
Q2.....	.....	+	-	.....	.....	.....	.....	.....	.....	-	+	.....	.....
Q3.....	+	-	.....	.....	.....	+	-	.....	.....	.....	.....	.....	.....
Q4.....	-	+	.....	.....	.....	.....	.....	.....	+	.....	.....	-	.....

The Ways which define a value factor and which thus have at least one value dimension in common show, nevertheless, considerable variation in the personality profiles of those who

8. The differences in mean ratings by the two groups for the three Ways are not individually significant, though that for Way 10 approaches significance.

9. In most cases the ratings of 7 and 6 for a Way were used to select the groups. In the case of some of the less liked Ways, where no ratings of 7 were given, ratings of 6 and 5 were used. Cattell Factor B is omitted because the differences between the groups on this factor were very small.



favor these Ways. Consider, for example, the columns for Ways 6 and 5 (both high in the value dimension B). Those who liked Way 6 were differentially high in Cattell Factors L and Q3, while those who liked Way 5 were differentially high in Cattell Factors F and M and low in Cattell Factor A. Similar ranges of variation will be found for Ways 4 and 8, 2 and 11, 9 and 13, 1 and 10—pairs of Ways that characterize the other value dimensions.

Table 41 suggests a general congruence between the operative values of a person as shown by the *16 Factor Test* and the conceived values as shown by ratings of the Ways. Take, for instance, the column for Way 4. The entries show that the persons liking Way 4 tended, relative to those liking other Ways, to be high in surgency (F) and low in super-ego strength (G), in paranoid schizothymia (L), sophistication (N), and anxious insecurity (O). These personality traits obviously match in certain respects the content of Way 4.

The persons who liked Way 12 tended, relative to those liking other Ways, to be high in emotional stability (C), dominance (E), and sophistication (N) and to be low in emotional sensitivity (I), hysteric unconcern (M), anxious insecurity (O), radicalism (Q1), and nervous tension (Q4). In contrast, the persons who liked Way 2 tended to be high in hysteric unconcern (M), anxious insecurity (O), independent self-sufficiency (Q2), and nervous tension (Q4) and to be low in emotional stability (C), character, or super-ego strength (G), adventurous autonomic resilience (H), and will control and character stability (Q3).

That the relation of operative and conceived values is not always so close (or, at any rate, so obvious) is instanced by Way 10. The persons who liked this stoically tempered Way were, relative to those who liked other Ways, high in cyclothymia (A), adventurous autonomic resilience (H), and radicalism (Q1), low in dominance (E), surgency (F), paranoid schizothymia (L), and independent self-sufficiency (Q2). This suggests that these persons are not inherently restrained (as the liking of Way 10 might make one think at first) but that the stoical attitude they accept is in effect a method of resolving the problem posed by cyclothymic and autonomic tendencies that do not have suffi-

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cient support in dominance and surgency. Through Way 10 they find a way to participate in the affairs of the world and yet protect themselves from expecting too much as a result of their activity.<sup>10</sup>

### 4. PSYCHOLOGICAL CHARACTERISTICS AND WAY 7

Since the high rating of Way 7 is one of the distinctive features of the United States material, it is of interest to examine the psychological characteristics of those who liked and those who disliked this Way that has no high or low factor loadings on any of the five value dimensions. Table 39 indicates a significant negative correlation between the ratings of Way 7 and the Thurstone temperament factors Impulsive, Dominant, and Sociable and a positive correlation with Reflective that achieves significance. The Cattell factors suggest a supplement to this analysis.

In the sample of forty-seven students from whom data were obtained, twenty gave Way 7 a rating of 7 or 6, and ten gave it a rating of 1, 2, or 3. When the mean scores of these groups are computed for the Cattell factors, comparison shows that those who liked Way 7 were considerably lower on emotional stability (C) and adventurous autonomic resilience (H) and markedly higher on anxious insecurity (O) and nervous tension (Q4). Essentially the same relationship prevailed in terms of a comparison of the means for Way 7 for those high on the Cattell factors in contrast to those low on these factors.<sup>11</sup> Those high in anxious insecurity (O) and paranoid schizothymia (L) had significantly higher means for Way 7 than those low in these factors, and those low in adventurous autonomic resilience (H) had a significantly higher mean rating for Way 7 than those high in this factor.

10. It might be added that D's were calculated between the mean ratings of the Ways for the fifteen persons highest on each of the Cattell Factors A, G, L, O, and Q2. The average of the ten D's was 1.87, the largest D being between the groups high on L and A, and the smallest D being between the groups high on L and Q2.

11. In this comparison the mean rating of Way 7 for the fifteen persons with the highest scores on a factor was contrasted with the mean rating of Way 7 for the fifteen persons with the lowest scores on the factor.

The persons who markedly favor Way 7 are psychologically complex. They do not strongly accept certain of the value dimensions to the exclusion of the others. This complexity goes along with an experience of tension and insecurity. Their problem may lie in an undue preoccupation with themselves and a resulting schizoid failure to participate in the larger sphere of human action.<sup>12</sup> But they do not differ significantly from those who dislike Way 7 on cyclothymia (A), character, or super-ego strength (G), hysteric unconcern (M), will control and character stability (Q3), dominance (E), surgency (F), or sophistication (N). Hence their experience of tension and insecurity is not the result of deficiency of temperament or character but is the accompaniment of their complexity. Their acceptance of Way 7 perhaps signalizes their acceptance of this complexity.

#### 5. SOME SPECULATIVE COMPARISONS

In this section brief references are made to some personality typologies that have an apparent similarity to some features of the value-dimension analysis. Since in no case is there available a group of persons who have rated the Ways and who have been rated in terms of the typologies to be considered, the statements to be made are without direct empirical support.

The three temperament categories of William H. Sheldon are worthwhile considering first, for certain indirect evidence is available. In terms of the content by which the two sets of categories are defined, viscerotonia would seem nearest to dependence, somatotonia to dominance, and cerebrotonia to detachment. That this relation does in fact obtain is shown in chapter vii, section 4, where an indirect comparison is made of the two sets of categories in terms of their relation to Sheldon's constitutional components, and more evidence of the congruence appears in chapter vi, section 9. But the relation is not one of identity: Sheldon explicitly was seeking temperament traits (personality traits that correlate with bodily traits), while Categories I, II, and III embody certain values the psychological

12. Thus they tend to be somewhat higher on Cattell Factor L (paranoid schizothymia *vs.* trustful altruism) than those who dislike Way 7; though the difference is not great, it is significant.

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correlates of which are not restricted to the level of temperament.

This comes out clearly when the value factors are considered. Factors B and C, we have seen, are the factors most intimately connected with temperament traits, and there is no doubt about their similarity to the categories of somatotonia and cerebrotonia.<sup>13</sup> Factors D and E were found not to have such a close connection with temperament traits, and neither of these matches well the category of viscerotonia.<sup>14</sup> Factor A, little related to temperament traits, has no analogue in Sheldon's categories.

David Riesman distinguished tradition-directed, inner-directed, and other-directed types of character.<sup>15</sup> The first would seem to be related to Factor A. The inner-directed character could presumably be high either in Factor C (as in Way 2) or in Factor B<sub>2</sub>' (as in Ways 6 and 12). The other-directed character could presumably be high in either Factor D (such as Way 13), in Factor B<sub>1</sub>' (as in Way 5), or, less clearly, in Factor E (as in Way 8). The Riesman character categories thus seem to embody the value categories but not to correspond to them in a simple manner.

Karen Horney distinguishes three temperamental trends found in both normal and neurotic behavior: tendencies to move "toward," "against," or "away from" people.<sup>16</sup> These basic trends seem to be special forms of the categories of de-

13. This can be seen from a comparison of the content of the Ways high in Factors B and C with the content of the two sets of twenty traits that define somatotonia and cerebrotonia (*The Varieties of Temperament*, chap. iii). It may also be noted that there is a correlation of  $-.62$  between somatotonia and cerebrotonia and a correlation of  $-.62$  between the factor loadings of Factors B and C.

14. This statement is based on a comparison of contents and upon the fact that the correlations of the factor loadings of Factors D and E with those of Factors B and C do not correspond to the correlations of viscerotonia with somatotonia and cerebrotonia. It is true, nevertheless, that Way 8, the purest index of Factor E, has obvious similarities to viscerotonia.

15. Some of the Ways were used by Riesman in his books *The Lonely Crowd* and *Faces in the Crowd*, and fruitful suggestions from these books have been incorporated in the present study.

16. For Horney's statement of some of the points made in the paragraph, see her *Neurosis and Human Growth*, pp. 19, 22, 186, 191, 297. The three basic trends are more fully delineated in *Our Inner Conflicts*.

pendence, dominance, and detachment. In the normal life of the child, according to her account, all these trends are present, though certain of them are emphasized more by some children than by others.<sup>17</sup> The neuroses are seen as "ways of life" which arise when the basic trends become locked in an unresolved conflict; the neuroses are attempted solutions of such a conflict. In the three main types of neurotic solution that she distinguishes, the self-effacing, the expansive, and resignation, the three basic temperament trends become elaborated into neurotic character traits. In terms of the present study, Horney's theory of the neuroses thus involves the value categories of dependence, dominance, and detachment at the levels of both temperament and character. And the neurosis itself can be regarded as the formation of a set of conceived values which do not in fact solve the conflict between operative values that they are intended to solve and yet which are tenaciously held onto because of the partial satisfaction that they afford.

Erich Fromm's typology of human character is given most fully in chapter iii of *Man for Himself*. Four main types of orientation are distinguished, each of which has a positive and a negative aspect, but only the positive aspect is considered in the present remarks.

The "receptive orientation" shows, in its positive aspect, such traits as acceptance, devotion, idealism, sensitivity, trust. The analogue in the value dimensions would seem to be Factor D.

The "exploitative orientation" manifests such traits as activi-

17. So far as I know, sufficient attention has not been paid to the question as to which kind of children in which family constellations tend to rely most heavily on the various strategies of dependence, dominance, and detachment. The Freudian account assumes a developmental process moving from dependence through detachment to dominance ("oral," "anal," and "genital" stages). This may well be the case; but individual differences in children (constitutional and temperamental), interacting with individual differences of parents, may throw light upon the tendency in specific cases for certain neuroses and psychoses to develop rather than others. The work being carried on by Dr. L. W. Sontag and his associates at the Fels Institute holds promise for these problems. A preliminary account is found in his paper "Personality as a Determinant of Performance," *American Journal of Orthopsychiatry*, XXV (1955), 555-62. The important problem of the dynamics of changes in values (whether in individuals or in societies) has perforce been neglected in the present study. It is necessary to be able to describe accurately the value states of a system at various times before the dynamics of value changes can be accurately investigated.

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ty, initiative, pride, impulsiveness, self-confidence. Factor B would seem to be the corresponding value dimension.

The "hoarding orientation" is characterized by such traits as carefulness, caution, restraint, economy, patience, imperturbability, steadfastness, orderliness, and loyalty. Some of these traits might suggest Factor C, but certainly in their totality the nearest analogue would be Factor A among the value dimensions. Factor C does not seem to have an analogue in Fromm's typology, though detachment finds a place in his general outlook.

The "marketing orientation" is described in terms of such traits as purposefulness, sociality, experimentation, efficiency, curiosity, adaptability, tolerance, wit, generosity. This orientation has no close correspondence to the value dimensions. The nearest similarity is to Factor E. Thus Fromm states that the marketing orientation implies "easy contact, superficial attachment, and detachment from others only in a deeper emotional sense."<sup>18</sup> This suggests some of the traits of Ways 4 and 8. Perhaps the marketing orientation is one historical form which a stress on Factor E can take. The relation, however, cannot be claimed with confidence.

The preceding four comparisons<sup>19</sup> suggest that some of the current typologies of personality are dealing with temperament and character traits which have analogues among the value dimensions disclosed by factor analysis of the ratings of the Ways. But the exact relations could be found only if a number of persons who rated the Ways were also classified according to the categories of the various typologies.

18. *Man for Himself*, p. 112.

19. It would be of interest to compare the Hindu doctrine of the three *gunas* with some of the contemporary psychological tritisms. According to the Hindu doctrine, the personality is a combination of three traits, *tamas*, *rajas*, and *sattva*, which manifest themselves throughout nature in various mixtures as well as in the human personality. The resulting differences in personalities are claimed to be related to differences in physiques, diseases, dreams, and occupations. The *Bhagavad-Gita* gives an accessible presentation of the *gunas*, but in the present context what is needed is a careful exploration of the doctrine in its more concrete forms, as in Hindu medicine. A paper by Professor Harimohan M. Bhattacharyya, "Types of Human Nature," in *The Cultural Heritage of India*, ed. Haridas Bhattacharyya (1953), Vol. III, presents some phases of the Hindu view on this topic.

6. THE ALLPORT-VERNON "STUDY OF VALUES"

The instrument most used during recent decades in psychological research into values has been the Allport-Vernon *Study of Values*. Hence it is of interest to relate the six values of that instrument, Theoretical, Economic, Aesthetic, Social, Political, Religious, to the Ways and their underlying value dimensions.<sup>20</sup>

For each Way, two groups of persons were formed: those who gave it a positive rating and those who gave it a negative rating.<sup>21</sup> The average score on each of the Allport-Vernon categories was then obtained for both groups. The more important differences of the two groups compared on each of the six categories are shown in Table 42. A '+' indicates that the Allport-Vernon score is noticeably higher for those who liked the Way than it is for those who disliked the Way, and a '-' indicates that the score is noticeably lower for those who liked the Way than for those who disliked it. The sample group is considerably higher in Theoretical and Aesthetic scores, and considerably lower in Economic, Social, and Political scores, than is the case for the 1,816 college students used to standardize the instrument. The range of difference between the highest and lowest mean scores is largest for Aesthetic and Religious (13.92 and 13.27) and smallest for Political (3.69). In no case is the score for Political appreciably higher for those who liked a Way than for those who disliked it. The score is slightly higher for those who liked Ways 4, 5, 8, 10, and 12, noticeably higher for those who disliked Ways 9 and 13.

It is seen from Table 42 that Ways 4 and 7 are positively related to Theoretical; Ways 5, 6, 8, and 12 to Economic; Ways 2 and 4 to Aesthetic; Ways 1, 3, and 13 to Social; Ways 3, 9, 10, 11, and 13 to Religious. In terms of these combinations Economic is seen to have some affinity with Factor B, Social with Factor A, and Religious with Factor D.

20. Gordon W. Allport and Philip E. Vernon, *Study of Values* (Boston: Houghton Mifflin Co., 1931). The revised edition that appeared in 1951 with the collaboration of Gardner Lindzey is here used. The *Manual of Directions* for the *Study of Values* discusses the relation of the Allport-Vernon categories to those of Eduard Spranger from which they were derived.

21. The ratings on the Ways (on a five-point scale) and the Allport-Vernon scores were supplied by Dr. Elsa A. Whalley for ninety students.

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That there is no identity of the value factors and the Allport-Vernon value categories is shown, however, by Table 43. The marks '+' and '-' have the same signification as in the previous table. Way 7 is excluded from this table because it has no high loadings on any factor.

That there is no identity of value dimensions and the Allport-Vernon value categories is instanced by the fact that Factors

TABLE 42  
NOTICEABLE DIFFERENCES IN ALLPORT-VERNON SCORES BETWEEN  
THOSE LIKING AND THOSE DISLIKING THE WAYS

Way	Theoretical	Economic	Aesthetic	Social	Political	Religious
1.....			-	+		
2.....		-	+	-		
3.....	-	-		+		+
4.....	+		+			-
5.....	-	+	-			
6.....		+	-			
7.....	+					-
8.....		+	-			-
9.....	-	-			-	+
10.....	-		-			+
11.....						+
12.....		+				
13.....	-		-	+	-	+

TABLE 43  
VALUE DIMENSIONS AND ALLPORT-VERNON VALUE CATEGORIES

Factor	Theoretical	Economic	Aesthetic	Social	Political	Religious
A (Ways 1, 3, 10)...	-		-	+		+
B (Ways 5, 6, 12).....		+	-			
C (Ways 2, 11).....		-	+	-	-	+
D (Ways 9, 13).....	-	-	-	+	-	+
E (Ways 4, 8).....	+	+				-

A, C, and D are all Religious, Factors B and E are both Economic, and Factors A and D are both Social. Further, Factors A and D are quite similar in terms of the entries in Table 43, and yet as value dimensions they differ considerably in content.

What, then, is the relation of the value dimensions and the Allport-Vernon value categories? It seems that these last categories furnish a classification of operative values and that the



basis of classification is essentially (though not entirely) in terms of institutionalized social roles. The validation of the instrument showed a correspondence between the actual preferences of artists, scientists, ministers, for example, with scores on the corresponding value categories. If such validation had not been obtained, the instrument would have been regarded as defective, a fact that shows the orientation of the instrument toward forms of institutionalized activity. "Ways To Live," in contrast, has little reference to kinds of activity differentiated within the social system; hence the factors derived from it have few institutional connotations. Tables 42 and 43\* may then be regarded as showing something of the interrelation of patterns of preferences generally operative in certain activities differentiated within the social system and the value dimensions dominant in certain conceptions of the good life. They also show that various types of social roles differ markedly in terms of the value dimensions which they embody. Finally, they give evidence of the general congruence of operative and conceived values previously noted: persons in certain professions, for example, tend to hold conceptions of the good life which favor the values generally operative in those professions. This, of course, need not be the case in every instance, and the congruence or lack of congruence for given individuals may be of various degrees. An investigation of such matters would be one way of studying the relation of values in the personality system and the values institutionalized in roles in the social system.

## 7. CONCLUDING REMARKS

This chapter is obviously only a preliminary exploration of the relations of value, temperament, and character. Nevertheless, such results as have been obtained show that psychological traits influence significantly the differential ratings of the Ways. The favor accorded to the various value dimensions is in part a function of individual psychological differences.

If the results were taken at their face value, it would seem that temperament traits play a more important part in valuation than do character traits, since there are more significant relations to the Thurstone temperament traits than to the charac-

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ter traits which presumably dominate the Cattell test. The interpretation of this fact is not, however, obvious. It may merely indicate that the content of the Ways is weighted more heavily in the direction of temperament than of character. There is some ground for believing this to be so, since the Ways are reasonably simple in conception and without the specific elaboration of detail that any actual manner of living would involve. More complex and subtle alternatives might well show closer relations to character traits than do the alternatives presented by the Ways.<sup>22</sup> While there is evidence that temperament and character traits both influence valuations, the present study does not warrant generalizations concerning the relative weight of such influences.

The analysis taken as a whole reinforces a point that emerged in chapter iv in another context: though psychological traits are determinants of values, they alone do not provide a sufficient basis to account for valuations. The study of values is not simply a psychological investigation couched in current terminology. In such a study reference must be made to the social system as well as to the personality system. Chapter vi shows that reference to the organism, considered as a biological system, is also necessary.

22. It must also be remembered that data from the Cattell test were scanty and not subjected to the same kind or degree of statistical analysis as were the data from the Thurstone schedule.

## *Biological Determinants of Value*

### 1. DATA

This chapter is concerned with the relation of differences in the ratings of the Ways to differences in physique. The main point of interest is the question as to whether the value dimensions are recognizable at the level of the organism. The physical characteristics of the raters are described according to the categories of Dr. William H. Sheldon—endomorphism, mesomorphism, ectomorphism, and body size—in addition to which some attention is paid to sex and age differences among the respondents.

Somatotype data in terms of these categories were obtained for four groups of raters, the data for two of them supplied by Dr. Sheldon himself. The first group, analyzed by him without photographs, was composed of 59 persons, men and women, somewhat older and distinctly more mature than members of any other group studied. It was not made up solely of students, and it was observed closely over a period of several years. The second group on which Sheldon supplied constitutional data was formed from 253 male students at Syracuse, Princeton, and Yale, who were collectively much younger than members of the first group. These persons had already been somatotyped by the standard photographic technique. I simply sent them copies of "Ways To Live" and other mimeographed material; I had no personal contact with them at any time. They cannot have had the same degree of interest in the project as the members of the first group. But it is the only reasonably large sample for which I was able to secure standard somatotype data.

From the beginning of the project, however, information was

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obtained from respondents as to age, sex, height, and weight. From the last two items body size (height times weight) can be calculated, and also the ratio of the height to the cube root of weight. From the resulting ratio it is possible to pick out groups of persons who are strongly endomorphic or ectomorphic, though it is not possible to isolate a clearly mesomorphic group in this way.<sup>1</sup> Such information supplements for some purposes the data gained from the two groups previously described.

Finally, there is some somatotype material on 122 Indian male students and 37 Indian women students and on 81 Chinese male students and 24 Chinese women students. This was gained by inspection after interviews. These last are not unimpeachable somatotype data, but they may serve to give some clues and to act as a basis for comparison with the United States material.<sup>2</sup> Some somatotype data on United States, Indian, and Chinese psychotics is introduced at the end of the chapter.

### 2. DIFFERENCES WITH AGE

Approximately 80 per cent of the respondents for whom age data were analyzed were between the ages of seventeen and twenty-five. About 400 were older, some of them college students but most of them attending lectures or courses in large cities at the adult education level. For the high-school age, data were obtained from 36 sophomores and 39 juniors in the University of Illinois High School.<sup>3</sup> The numbers are too small to merit much attention, and these two groups cannot be considered adequate samples of either high-school students or older persons. Nevertheless, certain trends seem worth mentioning in the hope that other investigators will be led to study the value patterns of age groups other than college students.

The tabulation of results was made for the most part at an early stage of this study when only ten Ways were being used. The analysis was made in terms of percentages of first choices

1. See Sheldon, *The Varieties of Human Physique*, pp. 265-69; *Atlas of Men*, pp. 340-44.

2. The correlations of my somatotype ratings with those of Sheldon (made on the basis of fifty photographs) were as follows: endomorphy, .82; mesomorphy, .87; ectomorphy, .93, my ratings on endomorphy tending in general to be lower.

3. The material was collected by Professor John W. Hanson.

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rather than in terms of means. The youngest age group tabulated contains only college students, not high-school subjects, and no differentiation is made with respect to sex. Of the 2,095 first choices, 582 are from women and 1,513 from men. The results are shown in Table 44.

It seems that the appeal of Ways 1, 2, 3, 9, and 10 tends to increase with age, and the appeal of Ways 4, 5, 6, and 8 to decrease. Additional data collected at a later date place Way 13 in the first group and Way 12 in the latter. There are not enough data on Way 11 to warrant remark. The appeal of Way 7 seems almost independent of age.<sup>4</sup>

TABLE 44  
PERCENTAGE OF FIRST CHOICES FOR TEN WAYS  
BY FIVE AGE GROUPS

AGE	N	Way									
		1	2	3	4	5	6	7	8	9	10
-20.....	752	14.6	2.2	4.5	3.6	6.2	9.4	44.4	10.9	0.8	3.5
21-25.....	933	15.3	1.1	4.6	4.2	6.0	8.8	45.0	9.1	0.9	5.0
26-30.....	221	16.3	3.6	5.0	3.6	4.1	10.4	43.9	6.8	0.9	5.4
31-35.....	74	18.9	2.7	8.1	0.0	5.4	8.1	46.0	4.0	0.0	6.8
36+.....	115	25.2	6.1	7.0	1.7	0.9	3.5	46.1	0.9	4.3	4.3

The high-school data point in the same direction: in terms of means the high-school sophomores and juniors were higher with respect to Ways 4, 5, 6, and 12 than the college students and lower with respect to Ways 1 and 10. The rating for Way 7 was even higher than the college rating. On Ways 9 and 13, however, the high-school students were higher than the college students.

The difference between the oldest age group and the other groups is marked.<sup>5</sup> For those thirty-six years old or older the order in which the ten alternatives are favored is 7, 1, 2, 3, 9 =

4. Frank A. Weil reported in the previously mentioned communication that in a group of 69 persons Ways 1, 3, 9, and 13 were significantly higher in those above age 40, and Ways 4, 6, 7, and 8 lower but not significantly so.

5. Of the 115 persons in this group, 46 are between 36 and 40 years old, 27 are between 41 and 45, 17 are between 46 and 50, and 25 are 51 years old or older. Fifty-two members of the group are men and 63 are women.

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10, 6, 4, 8 = 5, as contrasted to the college order of 7, 1, 6, 8, 3, 5, 4, 10, 9, 2 or the high-school order of 7, 6, 5, 1, 8, 3, 4, 10, 9, 2. In the older persons Factor B (enjoyment and progress through action) is clearly weaker than in the younger persons, while Factor D (receptivity and sympathetic concern) and Factor C (withdrawal and self-sufficiency) are both stronger. Factor A (social restraint and self-control) is also higher in the older group and seems indeed to increase with age. Ways 1, 3, and 10 are indicators of this factor. For the high-school group the average rank of these Ways is 6, for the college group it is 5, and for the oldest group it is 3.5.

These results suggest that after thirty-five, for many men and women in the United States, there is a marked decline in the appeal of activist and energetic conceptions of the good life and some increase in the appeal of the more conservative, receptive, meditative, and socially responsible conceptions.<sup>6</sup>

If the difference noted should hold up in a more extended study, it would help explain the partial divergence of the Indian, Japanese, and Chinese student data from the traditionally conceived nature of their cultures. These traditional ideas have been formed largely in terms of the "wisdom literatures" of the cultures, and wisdom is not, for the most part, the product of the young.

It hardly need be remarked that variations in value patterns with age are not simply biological in nature. Changes in the forms and levels of available energy will always exert an influence, but so will the physical and social environment in which these energies operate.

### 3. BODY SIZE

In an early phase of the study (1946) twenty-two subjects rated the first seven Ways and also seven paintings and seven

6. It will be seen later that there is a positive relation between Factor B and mesomorphy. It may well be that my sample of older persons did not get a fair share of mesomorphs. Perhaps the more mesomorphic individuals continue to favor later in life the Ways which stress action, while the less mesomorphic individuals find as time goes on that the more energetic conceptions of the good life that appealed to them in their youth are no longer found to be rewarding when the prop of youth's energy is removed.

poems. An agreement score between every pair of subjects was obtained by dividing the number of items both subjects liked or disliked by the total number of items. D's were also calculated between every pair of subjects from the somatotype ratings, and differences in body size were determined. The sum of these last two figures was taken as a measure of the difference between the physiques of two persons. The correlation between the 231 agreement scores and physique difference scores was found to be .32, and .45 when restricted to pairs of the same sex. The twenty-five cases of highest agreement scores were compared with the thirty cases of lowest agreement scores with respect to D's, body-size differences, and D's plus body-size differences. The high and low agreement groups differing significantly in terms of all three criteria, this preliminary study suggested that there is some tendency for persons to vary in their valuations in proportion to their variations in physique. The present more extensive data permit a fuller exploration of this matter. Body size and somatotype are considered in relation to the Ways in this chapter, and somatotype in relation to paintings in the following chapter.<sup>7</sup>

By 'body size' is here meant the product of height and weight. When so conceived, body size bears a relation to somatotype: the more ectomorphic persons tend to have smaller body sizes, and the more endomorphic persons tend to have larger body sizes. This, however, is only a tendency, since there are various body sizes for all kinds of somatotypes;<sup>8</sup> therefore it is relevant to raise the question whether body size has any relation to the valuations of the Ways.

It happens that there is little difference between small, medium, and large men when the Ways are ranked in the order of means in each body-size group. Similarly, when first choices are grouped according to the value factors (or according to Categories I, II, and III), there is no over-all significant relation to

7. The determination of D's between pairs of somatotypes is not used here; it assumes that the somatotype components are orthogonal dimensions, and this is not the case (see Sheldon, *The Varieties of Human Physique*, pp. 137-40).

8. For 250 male students the correlation of body size and height over the cube root of weight was  $-.34$ .

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the three body-size categories. However, on a sample of 250 men, significant positive correlations were found between body size and Ways 8, 9, 12, and 13; the largest negative correlation was with Way 7.<sup>9</sup>

The means for 837 men twenty-two years of age or younger, grouped according to small, medium, and large body size, are presented in Table 45. It will be noted that Ways 1, 2, and 7 are liked better by small persons and Ways 4, 5, 8, 12, and 13 by the large persons, an outcome in general agreement with the correlations already mentioned. With increasing body size, the means

TABLE 45  
MEANS OF THE WAYS ACCORDING TO BODY SIZE

BODY SIZE	WAY												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Small . . . . . (N=254)	4.96	2.87	4.07	3.68	4.24	4.76	5.73	4.43	2.78	3.60	2.64	4.27	2.04
Medium . . . . . (N=307)	4.96	2.79	4.08	3.72	4.34	4.87	5.57	4.58	3.00	3.74	2.67	4.60	2.12
Large . . . . . (N=276)	4.76	2.60	3.94	4.01	4.47	4.83	5.54	4.77	2.85	3.59	2.72	4.59	2.21

of Ways 2 and 7 progressively decrease, while the means of Ways 4, 5, 8, 11, and 13 progressively increase. The differences in the ratings between the three body sizes are, however, small: the average of the three D's is only .61.

With respect to 412 women (ages through twenty-two), the smaller women rated Ways 9, 10, and 11 higher than did the larger women, and Ways 1, 6, 8, 12, and 13 lower. This has some similarity to the men in that the smaller persons favored Ways higher in Factor C and lower in Factor B than did the larger persons. The average of the three D's for the women's groups was .75.

Body size, then, has only a slight bearing upon the ratings of the Ways, whatever may be its significance for other types of

9. Except in the case of Way 12,  $p < .01$ . The negative correlation for Way 7 is just below the .05 level of significance.



valuations. Since it is impossible on the basis of the present data to disentangle its influence from that of the somatotype, it is best to forego further discussion of body size as such and turn to a consideration of the somatotype.

#### 4. PRELIMINARY CONSIDERATION

Because it is an organism that becomes a self through participation in social interaction, the self obviously is influenced both by its organic substructure and by the society in which it develops. The only relevant and disputed question is the extent of this organic influence. No one would deny that certain physiques are incompatible with certain social roles. Ectomorphs are not noted long-distance swimmers; nor are persons with very small hands likely to be concert pianists; nor do endomorphs figure prominently in the ballet. Nevertheless, there is still considerable disagreement as to how far organic differences make themselves felt. Few contemporary psychologists and fewer social scientists believe that somatotype differences play any measurable role at the more complex levels of self and society. Even Sheldon some years ago expressed doubt whether somatotype differences would prove important in the present study. Because of the controversial state of the problem and because of the importance of knowing whether there is or is not a relation of the value dimensions to physique, it is well to study the matter with some care.

It is obvious that one would not expect differences in body build to play any major part in determining the acceptance or rejection of proposed conceptions of the good life. Evidence of the great influence of cultural traditions in this domain is already plain, and no one would suppose that these cultural differences merely reflect differences in physique. But individual differences at the psychological level also play a part, and it would be strange if these differences had no connection with differences of physique. Hence one would expect that organic differences played some role even at the complex level of value studied here.

Before turning to the facts that bear on the question, one

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ought to note that on the present approach the human organism is at most only one determinant of occurrences in the value field. And it is influenced at every stage of its development by the ecological and social systems of which it is a member. Itself a system, it lives only in its transactions with other systems.

It is not to be expected that, say, an ectomorphic physique will act in the same way under all conditions. It would be enough to find the modes of action characteristic of such a physique under certain conditions and to show how such modes of action differ in tendency and strength from those of other kinds of physique under the same circumstances. It may well turn out that under certain conditions ectomorphic persons act say, as, mesomorphic persons act under another and different set of conditions. And yet it may still be true over a wide range of circumstances that the ectomorphic person favors certain modes of action more than do persons of different physique.

The specific problem is the relation of somatotype differences to conceptions of the good life. Here too the general situation just outlined applies. Even if persons of certain somatotypes differentially favor certain Ways under certain conditions, one cannot conclude that they would make the same valuations under markedly different conditions. Thus the ectomorphic individual in a society in which the mesomorphic physique is numerically dominant and culturally esteemed is in quite a different situation than an ectomorph living in a society where ectomorphic physiques predominate and are culturally favored. Even the manner in which a person evaluates his own body is greatly influenced by the way such a body is evaluated in the culture in which he lives. India and the United States are contrasting societies in these respects, and certain differences in attitude between ectomorph and mesomorph are, as we shall see, discernible in the two countries.

Each stage of an organism's development affects the next stage of its development, but each stage of development has in turn occurred under the influence of other physical or social systems. Therefore, if bodies are determinants of values, values will in turn be determinants of how bodies act—including the act of rating the "Ways To Live."

## 5. THE QUESTION OF OVER-ALL STATISTICAL SIGNIFICANCE

Faced with a controversial issue of this sort, one may ask whether the over-all level of statistical significance is high enough to warrant consideration of particular details. This is good insurance against overestimating isolated positive correlations that always turn up in any empirical study. The present section is an attempt to give an affirmative answer to this question. It may be omitted without loss to the argument if one is not especially interested in this problem.

As a first step, an analysis of variance was made of the ratings of the Ways by three groups of 34 men students each, one of persons predominantly endomorphic, a second of persons predominantly mesomorphic, and the third of persons predominantly ectomorphic.<sup>10</sup> The differential favoring of the Ways by the three somatotype groups did not reach an acceptable level of significance, but it was large enough ( $p < .15$ ) to suggest the desirability of further study with larger groups. When the five Ways for which the differences between the groups were greatest were submitted to an analysis of variance, the interaction between somatotype group and liking of the Ways was significant. This suggested that somatotype differences may be relevant to the rating of some Ways and not to others. Two other results of the preliminary analysis were important: the differences in the frequency of usage of the seven rating categories by individuals and by somatotype groups were found not to be significant.

Further study was made of five other samples. The first of these was taken from the 253-male group already mentioned and was composed of 34 endomorphs, 70 mesomorphs, and 50 ectomorphs, all the individuals having a component rating of 5 or more on Sheldon's 7-point scale. The first choices of these three groups were then considered in relation to the value factors obtained in the United States analysis. Since there were no first choices for Ways 9 and 13, Factor D does not appear. In order to include all the Ways for which there were first choices,

10. The analysis was made by Dr. Jack W. Brehm. A somatotype component strength of 5 or more (on a 7-point scale) was required for assignment to one of the three groups.

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Way 7 (which had no high factor loading) was put under Factor C, for it was the third in rank in Category III when Ways 1 and 10 were assigned to Factor A (see Table 3). The results are expressed in Table 46.

Tested by the chi-square technique, this proves to have an acceptable significance. The significance, however, is carried mainly by Factors B and C. Factor E plays no differential role in this sample, and Factor A does not show a significant relation to somatotype difference in this or in any other analysis. This

TABLE 46  
FIRST CHOICES OF THE WAYS GROUPED ACCORDING TO  
SOMATOTYPE AND FACTORS (UNITED STATES)\*

Somatotype	Factor E (Ways 4, 8)	Factor B (Ways 5, 6, 12)	Factor C (Ways 2, 7, 11)	Factor A (Ways 1, 3, 10)
Endomorphs. . . . . (N=34)	5 (0.0)	8 (+14.3)	10 (-26.0)	11 (+29.4)
Mesomorphs. . . . . (N=70)	11 (0.0)	19 (+46.2)	23 (-19.3)	17 (-0.6)
Ectomorphs. . . . . (N=50)	7 (0.0)	3 (-70.0)	29 (+45.0)	11 (-12.0)
Totals. . . . . (N=154)	23	30	62	39

\* The figures in parentheses in this and Tables 47-50, 56, 57 indicate the percentage of first choices higher or lower than chance would yield.

is a result of considerable interest; it seems that "socialization" is independent of somatotype differences. It also shows that Ways 1, 3, and 10, which characterize Factor A, tend, when included in an analysis, to depress or even to hide the significance of the relation of the other Ways to differences in physique. Thus if they are omitted in the above analysis, the level of significance reaches the .01 figure.

The same material was also grouped according to Categories I, II, and III ("dependence," "dominance," and "detachment"), assigning Ways 3, 4, and 8 to Category I; Ways 5, 6, and 12 to Category II; and Ways 1, 2, 7, 10, and 11 to Category III. Here, too, the outcome is statistically acceptable, though it is the result largely of the differential choices of ectomorph and mesomorph on Ways 5, 6, and 12. The differential choice

by somatotype groups of the Ways under Category III is much less sharp than it was for Factor C—as one would expect from the previous analysis, since Ways 1 and 10 were assigned to Category III.

Another analysis was made of a sample formed by taking the extreme ends of a distribution of men (through ages twenty-two) made on the basis of the ratio of height to the cube root of weight. This yielded a larger group of endomorphs (91) and a somewhat larger group of ectomorphs (65). To these were added as a third group the 70 mesomorphs used in the two previous analyses. First choices were again classified according to the factors (with Factor D again omitted for the previously stated reason) and according to the Categories.

With respect to classification by factors, chi-square analysis yields an even better level of significance than in the previous analysis. Factor A again proves to have no relation to somatotype difference. Factor C retains its differential place; but Factor B largely loses its contribution, while Factor E plays a strong role. The results are substantially the same when the classification of first choices is made with respect to the Categories.

A third and larger sample was formed so as to have less extreme groups and to permit the inclusion of Factor D. The distribution formed from the ratio of height to weight was again the basis, but almost the entire distribution was sampled. The distribution had been divided into seven sections,<sup>11</sup> the first three of which (the ratios up to 12.8) and the last three (the ratios 13.2 and higher) were lumped together. In place of the remaining middle section there was substituted a group of 72 mesomorphs from the group of 253, but no limitation was made that the mesomorphic component be of at least strength 5—it was sufficient that it be the strongest component. Hence the resulting sample includes most of the somatotype population classified in terms of the relative strength of endomorphy, mesomorphy, and ectomorphy. The same method of analysis used on the two previous samples was employed. Factor A (as

11. To get sharper breaks, somatotypes with a ratio of 12.5, 12.9, 13.1, and 13.5 were not used.

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defined by Ways 1, 3, and 10) was tested for differential favoring by the three somatotype groups, and since it showed no significant relation, it was not included. Table 47 expresses the results. For this sample the level of significance ( $p = .06$ ) is somewhat less but marginally acceptable. Had Factor A been included, no acceptable significance would have been attained.

When, however, the first choices are grouped with respect to the Categories, the level of significance is acceptable, and in this case the sample is larger and all the Ways are included. Thus

TABLE 47  
FIRST CHOICES OF THE WAYS GROUPED ACCORDING TO  
SOMATOTYPE AND FACTORS (UNITED STATES)

Somatotype	Factor E (Ways 4, 8)	Factor D (Ways 9, 13)	Factor B (Ways 5, 6, 12)	Factor C (Ways 2, 7, 11)
Strongest in endomorphy..... (N=235)	66 (+20.9)	4 (+66.5)	85 (+3.7)	80 (-16.7)
Strongest in mesomorphy..... (N=72)	14 (-16.2)	0 (-100.0)	25 (0.0)	33 (+11.9)
Strongest in ectomorphy..... (N=183)	34 (-20.0)	1 (-46.6)	61 (-4.7)	87 (+16.8)
Total..... (N=490)	114	5	171	200

an acceptable test of significance is attained for a large sample of men, all the Ways are taken into account, and the range of somatotypes is almost completely covered. Table 48 furnishes the data upon which the chi-square analysis was made.

In tabulating comparable material from India and China, material commented on in later sections, the first choices of 154 Indian men and women students were analyzed by the same methods. When the first choices are grouped according to the five factors, the differential relation to the three somatotype groups reaches a high level of significance ( $p < .001$ ). This is also true when the Ways are grouped according to the Categories. Table 49 gives the data for this last grouping.

The Chinese first choices total 100, men and women com-

bined. When grouped according to the five factors, the differential relation to somatotypes is not acceptable, nor is it acceptable when Factor A (as determined by Ways 1, 3, and 10) is omitted. When, however, the grouping is by Categories I, II, and III, the result is satisfactory ( $p < .03$ ). Table 50 presents the data upon which this last analysis is based.

It is concluded that differences in somatotype have an overall statistically significant influence upon the ratings of the thirteen Ways. That the level of significance is very high when the samples are combined is shown by Tables 56, 57, and 58.

TABLE 48  
FIRST CHOICES OF THE WAYS GROUPED ACCORDING TO THREE  
SOMATOTYPE GROUPS AND CATEGORIES I, II, AND III  
(UNITED STATES)

Somatotype	I (Ways 3, 4, 8, 9, 13)	II (Ways 5, 6, 12)	III (Ways 1, 2, 7, 10, 11)
Strongest in endomorphy . . . . . (N=298)	88 (+18.9)	85 (+6.3)	125 (-13.2)
Strongest in mesomorphy . . . . . (N=96)	20 (-15.9)	25 (-3.8)	51 (+10.9)
Strongest in ectomorphy . . . . . (N=242)	50 (-16.9)	61 (-6.2)	131 (+12.0)
Total . . . . . (N=636)	158	171	307

TABLE 49  
FIRST CHOICES OF THE WAYS GROUPED ACCORDING TO  
SOMATOTYPE AND CATEGORIES I, II,  
AND III (INDIA)

Somatotype	I (Ways 3, 4, 8, 9, 13)	II (Ways 5, 6, 12)	III (Ways 1, 2, 7, 10, 11)
Endomorpha . . . . . (N=22)	12 (+300.0)	1 (-76.5)	9 (-38.8)
Mesomorpha . . . . . (N=46)	6 (0.0)	12 (+34.0)	28 (-9.1)
Ectomorpha . . . . . (N=86)	3 (-74.3)	17 (0.0)	66 (+14.6)
Total . . . . . (N=154)	21	30	103

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### 6. D'S BETWEEN SOMATOTYPE GROUPS

It is already evident from the levels of significance noted in the preceding section that the influence of somatotype on the ratings of the Ways is to be neither ignored nor exaggerated. The D's between the main somatotype groups (men only) in three cultures, as determined from the mean ratings,<sup>12</sup> are listed in Table 51.

TABLE 50  
FIRST CHOICES OF THE WAYS GROUPED ACCORDING TO  
SOMATOTYPE AND CATEGORIES I, II,  
AND III (CHINA)

Somatotype	I (Ways 3, 4, 8, 9, 13)	II (Ways 5, 6, 12)	III (Ways 1, 2, 7, 10, 11)
Endomorphs..... (N=14)	5 (+23.0)	1 (-74.4)	8 (+33.3)
Mesomorphs..... (N=59)	19 (+11.1)	22 (+33.4)	18 (-29.1)
Ectomorphs..... (N=27)	5 (-36.2)	5 (-33.8)	17 (+46.6)
Total..... (N=100)	29	28	43

TABLE 51  
D'S BETWEEN MEAN RATINGS OF THE WAYS FOR THREE  
SOMATOTYPE GROUPS IN THREE CULTURES

Somatotype	United States	India	China
Mesomorph/endomorph....	1.42	2.73	2.79
Mesomorph/ectomorph....	1.81	2.10	1.70
Ectomorph/ectomorph....	1.63	2.19	2.25
Mean.....	1.62	2.34	2.25

It may be noted that the D between mesomorph and ectomorph is the highest in the United States group, lowest in the Chinese and Indian groups. The D's in Table 51 are smaller than the comparable D's between the three samples. The average of

12. The sizes of the samples are respectively 154, 122, and 81. The United States group and the Chinese group are dominated by mesomorphs, the Indian group by ectomorphs.



the somatotype groups' D's is 2.07; that of the D's between the three cultures (computed from mean ratings) is 3.38 (see Table 9). This fits in with the general finding that cultural differences are in the main greater than differences between groups of students within a culture. Since, however, an over-all significance has been established, variations in somatotype are not to be neglected.

That this is so can be illustrated in another manner. Table 52 gives D's between the mean ratings of groups of persons of the same and different somatotype component strengths for the same and different somatotype components.<sup>13</sup> Thus the first entry is to be read as follows: "The D of the mean ratings of the Ways is 2.55 between a group composed of persons 6 in endomorphy and another group of persons 5 in endomorphy."

TABLE 52  
D'S BETWEEN RATINGS OF THE WAYS FOR GROUPS OF  
DIFFERENT SOMATOTYPE COMPONENT STRENGTH

Same Component	D's	Different Components	D's
Endo 6/endo 5 . . . . .	2.55	Endo 6/meso 6 . . . . .	3.06
Endo 6/endo 4 . . . . .	3.33	Endo 5/meso 5 . . . . .	2.00
Meso 6/meso 5 . . . . .	2.16	Endo 6/ecto 6 . . . . .	3.90
Meso 6/meso 4 . . . . .	4.00	Endo 5/ecto 5 . . . . .	3.07
Ecto 6/ecto 5 . . . . .	3.14	Meso 6/ecto 6 . . . . .	3.56
Ecto 6/ecto 4 . . . . .	3.54	Meso 5/ecto 5 . . . . .	2.72

The column at the left suggests that persons of 6 and 5 component strength differ less than persons of 6 and 4 component strength. And persons with a component strength of 6 are likely to be more similar physically to persons with a component strength of 5 in that component than to persons of strength 4 in that component.<sup>14</sup> The column at the right indicates that the

13. Because each group has the same number of members ( $N = 8$ ), the results cannot be regarded as artifacts due to differences in sample sizes. The small  $N$  was due to the fact that only 8 endomorphs of component strength 6 were available.

14. This results from the fact that the total component strength ranges from 9 to 12, i.e., the three component strengths are partially dependent. Persons with a 6 in a component cannot in general differ as widely in the other components as persons with a 5 in the component in question.

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D's are greater between persons with component strengths of 6 in two components than between persons with component strengths of 5 in the two components. The two columns together show that groups of 6 and 5 in the same component are nearer in ratings of the Ways than when the group of component strength 6 is paired with a group of component strength 6 in another component.

These data, slight though they are, support the finding in the 1946 study that persons show a tendency to differ in their valuations of the Ways in proportion to differences in their somatotypes.<sup>15</sup> If this is so, differences in valuation are smaller for the less extreme physiques, and because such physiques bulk numerically large in the population, the effects of constitutional variations upon the total cultural pattern are lessened. There are, nevertheless, a relatively large number of physiques with a component strength of 5 or more in some component, and their presence helps to explain to some extent the diversity of the ratings of the Ways within a culture; and in so far as there are differences in the distribution of physiques in different cultures, they contribute to the differences in valuation among cultures.

### 7. THE NATURE OF SOMATOTYPE INFLUENCE

The concern here is with the relation between constitutional differences and the dimensions of value. Some of the relevant data have been given in section 5, but they are yet to be interpreted in terms of the present problem. It is helpful at this point first to introduce some new data. As was remarked at the beginning of this chapter, the first and most intensively studied group (59 men and women) was not composed solely of students but contained also a number of older and more mature persons. Twenty-three men and 26 women of the latter group rated all of the Ways. These 49 were divided into three groups, depending upon the dominance of the three somatotype com-

15. Not enough persons of component strength 7 were available for the author to know whether this relation extends to them. It is quite possible that the most extreme somatotypes are subjected to strong social pressures which tend to make their valuations less affected by constitution than, say, those of component strength 6.

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ponents, and a fourth group was formed from those 15 of the 49 persons whose component strengths were 3 or 4 in all components. (The physiques of members of the fourth group were called, following Sheldon, "mid-range.") Table 53 gives the mean ratings of these four groups, Table 54 the factor scores by groups, and Table 55 the sum of the means of the various groups for the Ways classified under the Categories.

From the tables it appears that endomorphy coincides

TABLE 53  
MEAN RATINGS OF THE WAYS FOR  
FOUR SOMATOTYPE GROUPS

Way	Endomorphs (N = 10)	Mesomorphs (N = 25)	Ectomorphs (N = 14)	Mid-rangers (N = 15)
1.....	5.00	4.89	5.08	4.81
2.....	3.40	4.09	5.08	4.00
3.....	4.80	4.33	4.30	4.59
4.....	4.30	4.60	3.79	4.07
5.....	3.60	4.16	2.29	3.46
6.....	4.30	5.18	4.14	4.40
7.....	7.00	6.20	6.42	6.67
8.....	5.20	4.33	3.86	4.27
9.....	3.70	4.04	4.07	3.61
10.....	4.20	5.00	5.36	4.33
11.....	2.50	3.32	3.78	3.67
12.....	3.83	4.88	3.55	4.33
13.....	3.33	2.88	2.55	2.77
Sum...	55.16	57.90	54.27	54.98
Mean...	4.24	4.45	4.17	4.23

TABLE 54  
FACTOR SCORES ON THE WAYS FOR  
FOUR SOMATOTYPE GROUPS

Factor	Endo- morphs (N = 10)	Meso- morphs (N = 25)	Ecto- morphs (N = 14)	Mid- rangers (N = 15)
A.....	1.63	1.76	2.22	1.69
B.....	3.89	4.78	3.38	4.13
C.....	.77	1.08	2.19	1.40
D.....	3.77	3.63	3.51	3.47
E.....	4.75	4.46	3.82	4.17
Av.....	2.96	3.14	3.02	2.97

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(though only slightly) with Factors D and E and Category I, mesomorphy with Factor B and Category II, ectomorphy with Factor C and Category III. The mid-range group (with one minor exception in Factor D) is never the highest or lowest in score on any factor or Category. These tendencies seem understandable in terms of the physical characteristics of the main somatotype groups. The strength and energy of the mesomorph might well predispose him to modes of life calling for vigorous action; the fragility and sensory sensitivity of the ectomorph might well incline him to modes of life that do not call for physical vigor and that protect him from overstimulation; the

TABLE 55  
AVERAGE SUMS OF MEAN RATINGS OF WAYS GROUPED BY  
CATEGORIES FOR FOUR SOMATOTYPE GROUPS

Category	Endo- morphs (N = 10)	Meso- morphs (N = 25)	Ecto- morphs (N = 14)	Mid- rangers (N = 15)
I (Ways 3, 4, 8, 9, 13) . . .	4.27	4.04	3.71	3.86
II (Ways 5, 6, 12) . . . . .	3.91	4.74	3.33	4.06
III (Ways 1, 2, 7, 10, 11) .	4.42	4.70	5.14	4.70

relaxation of the endomorph might encourage neither action nor self-protection but favor modes of life stressing enjoyment and responsiveness.

When one returns to the groups composed entirely of students, this general direction of linkages is confirmed. Tables 56 and 57 show the basic supporting data. When the first choices of the main United States, Indian, and Chinese groups are combined, and the three somatotype groups paired with the five factors as in Table 56, not only is the total significance high, but relations very similar to those found in the previous analysis occur. When the difference between the actual number of first choices is compared to the number to be expected by chance (a figure not here given), the following results are found: Factor A proves to have no significant relation to the somatotype groups; Factor B is significantly higher for the mesomorph than for the ectomorph; Factor C is significantly

higher for the ectomorph than for the endomorph; Factor E is significantly higher for the endomorph than for the ectomorph or the mesomorph. Factor D, however, presents a problem, since it is significantly higher for the mesomorph than for the ectomorph, whereas in the previous analysis Factor D went with endomorphy. Part of the explanation lies in the fact that eight of the ten first choices that fall in the mesomorph cell for Factor D come from the small China sample as choices of

TABLE 56  
COMBINED FIRST CHOICES GROUPED ACCORDING TO  
SOMATOTYPE AND FACTORS\*

SOMATOTYPE GROUP	FACTOR				
	A	B	C	D	E
Strongest in endomorphy..... (N=368)	87 (- 7.9)	95 (+ 4.4)	100 (-17.4)	7 (- 9.1)	79 (+48.6)
Strongest in mesomorphy..... (N=271)	65 (- 6.5)	78 (+15.6)	89 (0.0)	10 (+75.5)	29 (-25.8)
Strongest in ectomorphy..... (N=405)	116 (+11.5)	86 (-14.5)	155 (+15.7)	5 (-41.8)	43 (-26.7)
Total..... (N=1,044)	268	259	344	22	151

\* The groups combined are those referred to in Tables 46, 47, 49, and 50. The total chi square being 35.63, with 8 degrees of freedom  $p < .0001$ .

Way 13, and it has been previously noted that the translation of Way 13 into Chinese made it acceptable to the mesomorphs. Except for these votes Factor D goes with endomorphy rather than with mesomorphy.<sup>16</sup>

When the first choices of the United States, Chinese, and Indian students are considered in relation to the Categories, the level of statistical significance is even higher, and the relation of endomorphy to Category I, of mesomorphy to Category II, and of ectomorphy to Category III is again confirmed. Table

16. The levels of significance referred to in this paragraph are respectively .05, .01, .01, .001, .05. None of the relations between other pairs of somatotype groups reaches the .05 level. The chi-square statistic was used throughout.

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57 presents the data,<sup>17</sup> and Table 58 shows the level of significance between all possible combinations of the three somatotype component groups.

It appears that with respect to the Categories the strongest opposition is between mesomorph and ectomorph, the weakest opposition between mesomorph and endomorph.<sup>18</sup> The over-

TABLE 57  
COMBINED FIRST CHOICES GROUPED ACCORDING TO  
SOMATOTYPE AND CATEGORIES

Somatotype Group	I (Ways 3, 4, 8, 9, 13)	II (Ways 5, 6, 12)	III (Ways 1, 2, 7, 10, 11)
Endomorphs..... (N=70)	22 (+60.6)	10 (-33.2)	38 (-7.8)
Mesomorphs..... (N=175)	40 (+16.6)	53 (+40.2)	82 (-20.2)
Ectomorphs..... (N=163)	18 (-43.8)	25 (-28.8)	120 (+25.0)
Total..... (N=408)	80	88	240

TABLE 58  
LEVELS OF STATISTICAL SIGNIFICANCE BETWEEN DIFFERENCES IN NUMBERS OF FIRST CHOICES OF THE WAYS FOR THREE SOMATOTYPE GROUPS WITH RESPECT TO THE CATEGORIES

Somatotype Groups	I	II	III
Endomorph vs. mesomorph...	.....	.05	.....
Endomorph vs. ectomorph...	.001	.....	.10
Mesomorph vs. ectomorph...	.01	.001	.01

all differences between all three groups for each Category are, however, significant ( $p < .01$ ).

This clear indication of direction does not mean that the

17. Table 57 combines the groups represented in Tables 46, 49, and 50. The chi square in Table 57 is 35.93; with 4 degrees of freedom,  $p < .000001$ .

18. This agrees with the relations expressed in terms of the United States D's in Table 51.

somatotype influence is the main determining factor or that its influence is always constant. Table 57 shows, for instance, that the Ways under Category III, while differentially preferred by the ectomorphs, are more often chosen by all three somatotype groups than Ways under Categories I and II. Category III includes the two strongest Ways (1 and 10) on Factor A (social restraint and self-control), and the appeal of these Ways reflects the degree of socialization of an individual and varies, as has been pointed out, with his age.

Even within the United States samples there are variations with respect to the amount of differentiation between somatotype groups. A difference statistically significant in one sample is not always so in another. In the groups somatotyped by Sheldon the differential role of the mesomorphic group is greater than in the groups formed in terms of the ratio of height to the cube root of weight. This may be due to the choice of the ratio of 12.4 as the cutting point to isolate a strongly endomorphic group; for a large number of mesomorphic somatypes fall below this ratio,<sup>19</sup> especially since men through the age of twenty-two were included in determining the ratios. This would blur the distinction between this "endomorphic" group and the mesomorphic group and increase its differentiation from the ectomorphic group. This state of affairs would be even more pronounced when the cut was made at 12.8, as in Table 47. The total evidence leaves no doubt that mesomorphy is related to Factor B.

That the somatotype influence is not always uniform is illustrated with more certainty by the China and India samples. Of all the samples, the Chinese first choices show the least influence of somatotype differences. Factor B remains closely linked with mesomorphy, but Factor C is only slightly inclined in the direction of the ectomorph, and Factors D and E show no significant relation to endomorphy. It is possible that any critical situation, such as a revolution, tends to depress, though not to negate, the influence of constitutional differences.

In the India sample the mesomorphs and ectomorphs are not so opposed as they are in the United States material. It has been

19. See Sheldon, *Atlas of Men*, p. 340, Tables 7, 8.

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previously noted that the D's on the mean ratings are smaller for these two groups in India than for other somatotype pairings, while for the United States they are the largest (Table 51). In terms of numbers of first choices the difference in India between mesomorph and ectomorph on Factors B and C is slight, though still in the same direction as in the United States. Whether influenced by cultural tradition or by differences in the distribution of somatotypes in the United States and India,<sup>20</sup> the Indian mesomorphs do not resist so much as do the United States mesomorphs the Ways that are differentially favored by United States ectomorphs, and the Indian ectomorphs do not resist so much as do the United States ectomorphs the Ways differentially favored by the United States mesomorphs. This is a clear and important illustration of the point emphasized in section 4, namely, that the influence of somatotype differences on ratings of the Ways is not wholly independent of cultural and environmental contexts.

A consideration of the somatotype components in relation to the individual Ways confirms in general the conclusions that have been drawn from the groupings in terms of value factors and Categories. Correlations were computed between the strengths of the three somatotype components and the ratings of the Ways by 250 United States men students. They are in general low: the highest positive correlation is .25 and the highest negative correlation is  $-.22$ . The statistically acceptable ones are only six in number (for four of these  $p < .001$ ), and only four others approach the acceptable level ( $p < .05$ ). Of these ten the correlation of endomorphy is positive with Way 11 and negative with Way 7; the correlation of mesomorphy is positive with Ways 5 and 12 and negative with Ways 2, 7, and 11; the correlation of ectomorphy is positive with Way 7 and negative with Ways 5 and 12. Taking into account the

20. As seen from Tables 46, 49, and 50, the India sample contains proportionately many more ectomorphs and considerably fewer mesomorphs than do the United States and China samples. These samples are too small to permit generalization; but with respect to the relative preponderance of mesomorphs and ectomorphs in the United States and India, I hazard the guess that they are not far wrong. For a study of Chinese physiques, see P. H. Stevenson *et al.*, "Chinese Constitutional Differentiation and Kretschmerian Typology," *Human Biology*, IX (1937), 451-81.



correlations with body size (positive with Ways 8, 9, 12, and 13), eight of the thirteen Ways thus have a significant relation to constitutional considerations, at least for men. Ways 1, 3, and 10 do not, being related to the interpersonal process of socialization. Way 6 approaches an acceptable correlation with mesomorphy but does not reach it.

The correlation of the ratings of the Ways to somatotype components centers essentially around the opposition of Ways 5 and 12 to Ways 2, 7, and 11; it is primarily grounded in the opposition of mesomorph and non-mesomorph. The sharpest and most stable contrast in the data occurs between those high and those low in mesomorphy. Thus the means for Ways 5 and 12 are higher for the mesomorphs in the United States, India, and China samples than for the endomorphs or ectomorphs, lower for Way 2. The line between the ectomorph and the endomorph is less definite and varies more from culture to culture. One gets the impression that the character of life of the mesomorph remains most stable, that of the ectomorph somewhat less so, and that of the endomorph least stable of all. Perhaps this illustrates rather than negates the findings which relate endomorphy to Factors D and E: being highest in receptivity (most open to, and in need of, stimulation from without), perhaps the endomorph is the chameleon among the physiques and tends to take on most strongly the colors of his cultural surroundings, even if he does not always succeed in doing so.<sup>21</sup>

It may be remarked that the differences in the ratings of the Ways by men and women (chap. iii, sec. 7) is in accord with somatotype differences. In terms of factor scores based on mean ratings of the Ways, women have a higher score on Factor D and a lower score on Factor B. These factors are related to endomorphy and mesomorphy, respectively; and women are higher in endomorphy and lower in mesomorphy than men.<sup>22</sup>

21. The correlations between endomorphy and the Ways are noticeably lower than those for ectomorphy and mesomorphy, and as the next section will show, this holds also for the correlation of endomorphy and certain temperament variables. It would be interesting to know whether this is true for other cultures.

22. See *Atlas of Men*, pp. 12-16.

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A word must also be said about the mid-range physiques, for they have been largely neglected in this account. The mean ratings of the Ways for fifteen of them were furnished in Table 53. What is now to be said about them is largely in terms of another group of 67 men, but for the most part it applies also to the smaller group.

The most definite thing to be noted about the mid-range group is that it is in the middle range of the value dimensions as well. With minor exceptions, persons in the mid-range group neither like nor dislike a given Way as much as do the members of some other group. In particular, the Ways that have extreme loadings on the five factors are liked less by them than by some other more extreme somatotype group. Their factor scores tend to be neither the highest nor the lowest except for the slight variation under Factor D in Table 54. Their D's from other somatotype groups are less than the D's between the other groups: the average D is 1.04, which may be contrasted to the United States D's in Table 51. In the smaller group of 15 persons represented in Table 53, the average D of mid-rangers compared to the other groups is 1.92, while the average D among the others is 2.92.

Thus the mid-range persons confirm in their own manner the relation between physique and the value dimensions exemplified in the more extreme somatypes. Not favoring the Ways that represent extremes of the value dimensions, and with factor scores neither lowest nor highest among the somatotype groups, they give further evidence that physique and valuation are in the main consonant.

The most liked Ways would be in general modes of life congenial to mid-range persons and their neighbors (persons with a strength of 5 in some component), because they are the numerically dominant persons. Such modes of life would not put an extreme emphasis upon any of the value dimensions. It was noticed in chapter ii that Ways 1, 3, and 6 are generally rated high in the cultures here studied and Ways 2, 4, 9, and 11 rated low. It is now evident that the latter Ways are ones tending to appeal to the more extreme, hence rarer, physiques. Ways 1, 3, and 6, to the contrary, do not demand specialized forms of

physique and are liked about equally by all somatotype groups.<sup>23</sup>

That these Ways 1, 3, and 6 are preferred to other modes of life also congenial to the less specialized physiques is perhaps the result of the fact that they embody values important for the continuing operation of a society: they stress the conservation of what has been achieved, sympathetic concern for others, and reconstruction of the self and society in the face of new problems. Here again, biological and social determinants of value are both at work, and in a complementary fashion.

#### 8. PHYSIQUE AND TEMPERAMENT

Chapter v noted a number of significant relations of the Ways to psychological traits, and the present chapter illustrates the same fact with respect to the relation of the Ways to somatotype differences. Hence it is to be expected that there is some correlation of psychological traits and physique differences. Table 59 gives the correlations for 92 college men between the seven Thurstone temperament variables and amounts of endomorphy, mesomorphy, and ectomorphy. Since the estimations of somatotype were made by inspection rather than from standard photographs, the figures cannot be regarded as more than suggestive. For 92 persons a correlation of .20 is statistically acceptable.

Especially striking is the sharp opposition of mesomorphy and ectomorphy with respect to the temperament traits. Throughout this study a similar opposition appears in the ratings of the Ways high in factor B and those high in Factor C, and this difference was found in chapter v to be reflected in temperament traits. The present data indicate that Factors B and

23. Way 6 presents some problems because it is the third highest item defining Factor B. Careful reading, however, will show that it has a place for intellectual activity as well as physical activity; and although it does not stress co-operative work, it is certainly compatible with such work. Hence various persons can enlist under its banner. Although there is some correlation between mesomorphy and the ratings of Way 6, it is not statistically significant as are the correlations between mesomorphy and Ways 5 and 12. The main point made in the text could also be stated in terms of communalities: Ways 1, 3, and 6 have low communalities, while Ways 2, 4, 9, and 11 have considerably higher communalities.

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C are most closely connected with constitutional differences, Factor A least so.

Another noteworthy feature of Table 59 is the non-correlation of endomorphy with any of the seven temperament variables, a situation suggesting that the Thurstone variables do not include temperament traits characteristic of endomorphy or that the temperaments of endomorphic persons show greater variability than those of mesomorphic and ectomorphic persons. The alternatives are not exclusive; the second alternative is supported by the fact, already noted, that the correlations of endomorphy

TABLE 59  
CORRELATIONS OF SOMATOTYPE COMPONENT VARIABLES WITH THURSTONE'S TEMPERAMENT VARIABLES (N=92)

Temperament Variable	Endomorphy	Mesomorphy	Ectomorphy
Active.....	.15	.08	-.19
Vigorous.....	.03	.52	-.27
Impulsive.....	.14	.23	-.31
Dominant.....	.08	.10	-.17
Stable.....	.08	.19	-.16
Sociable.....	.12	.20	-.23
Reflective.....	-.11	.09	-.02

with the Ways are markedly lower than the correlations of the Ways with mesomorphy and ectomorphy.

The correlations with respect to Reflective require some comment because one might have expected a higher correlation of this trait with ectomorphy than with mesomorphy. But the correlations are all very low, and the scores on Reflective are almost uniformly very high in this sample. Hence for these students the category of Reflective is more a (perhaps temporary) character trait than a temperament trait, having little or no relation, therefore, to physique.

Table 60 shows percentiles of 48 of the sample of 92 persons, thus exhibiting somewhat the same relationships as Table 59. But it is included because it is based on mean temperament scores of various somatotype groups rather than correlations and because it differentiates between endomorphic and ecto-

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morphic mesomorphs in a way not previously done in this study. The figures in the cells are the average percentiles of the somatotype groups with respect to the temperament variables. The table shows the endomorphs to be higher than the mesomorphs on Impulsive and Sociable. In terms of correlations (see Table 59) the mesomorphs are higher than the endomorphs on Impulsive and Sociable, but the differences there are not large. In both cases the ectomorphs are lower than the endomorphs

TABLE 60  
AVERAGE PERCENTILES OF FOUR SOMATOTYPE GROUPS WITH  
RESPECT TO THURSTONE'S TEMPERAMENT  
VARIABLES (N=48)

Somatotype	Active	Vigorous	Impulsive	Dominant	Stable	Sociable	Reflective
Endomorphs . . . . (N=7)	59.8	25.7	45.2	52.0	45.4	42.9	82.7
Endomorphic mesomorphs . . . (N=12)	40.9	42.7	24.3	47.2	52.8	28.0	83.8
Ectomorphic mesomorphs . . . (N=9)	63.1	41.1	27.6	44.5	31.8	21.0	87.5
Ectomorphs . . . . (N=20)	36.8	25.7	12.2	39.8	40.2	17.9	73.2

or mesomorphs on Active, Impulsive, Dominant, and Sociable. It is seen that the group as a whole is very high in the category Reflective.

### 9. PSYCHOSES AND SOMATOTYPES

An indirect approach to the relation of the value dimensions to somatotype components is furnished by the study of psychotic behavior; for a psychosis is a way of life exemplifying in an exaggerated form traits found in ordinary behavior.

According to Sheldon, cycloid, or manic-depressive, behavior is characterized by an extreme pathological absence of cerebrotonia, paranoid behavior by an extreme pathological absence of viscerotonia, and schizophrenic behavior, of the hebephrenic form, by an extreme pathological absence of somatotonia.<sup>24</sup> We

24. See Sheldon, *Varieties of Delinquent Youth*, chap. ii, especially pp. 43-49. Extreme absence of cerebrotonia, viscerotonia, and somatotonia is of course possible on Sheldon's view without there being a psychosis. I suggest that psychotic behavior also

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now assume that there is a relation, though not an identity, between Sheldon's three temperament variables in the order given above and the categories of detachment, dependence, and dominance, i.e., III, I, and II.

Evidence has been given that there is a connection between detachment (Factor C) and ectomorphy, dependence (Factors D and E) and endomorphy, dominance (Factor B) and mesomorphy. If it could be shown that there is a relation of psychotic behavior to the somatotype components, this would be additional evidence for the relation of the value dimensions to the somatotype components. It would also be evidence for the assumed similarity between Sheldon's three temperament variables and the Categories of the present approach.

Evidence of the indicated relation between psychotic behavior and the somatotype components has been furnished by Sheldon and by Dr. Phyllis Wittman Huffman in the report of a study made at the Elgin State Hospital.<sup>25</sup> And a paper by Dr. Nathan S. Kline and Ashton M. Tenney has confirmed these results in the case of schizophrenics.<sup>26</sup> One purpose of the present section is to add some evidence that the same general situation obtains for psychotics in India and China as well.

In 1948 and 1949 data were secured on 50 psychotics in China and India.<sup>27</sup> Prior to any knowledge of clinical findings an estimate was made by inspection of the somatotype of each subject.<sup>28</sup> After this had been done for all subjects in a given

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involves the extreme absence of Factor A (social restraint and self-control) represented in Ways 1, 3, and 10. Recognition of this would keep together the biological and social facets of psychotic behavior.

25. "A Study of the Relationship between Constitutional Variations and Fundamental Psychotic Behavior Reactions," *Journal of Nervous and Mental Disease*, CVIII (1948), 470-76. See also the discussion of this study in *Varieties of Juvenile Delinquency*, chap. ii.

26. "Constitutional Factors in the Prognosis of Schizophrenia," *American Journal of Psychiatry*, CVII (1950), 434-41.

27. A report on this material was made in a short article, "Similarity of Constitutional Factors in Psychotic Behavior in India, China, and the United States," *American Journal of Psychiatry*, CVIII (1951), 143-44.

28. The subjects were made available by Dr. Leslie Cheng, Neuropsychiatric Institute, Nanking; Dr. A. S. Johnson, Government Mental Hospital, Madras; Dr. N. N. Chatterji, Lumbini Park Mental Hospital, Calcutta.

institution, the psychiatric classification of the subjects was made available to me. The average somatotype was then computed for the subjects with each type of psychosis. The results, compared with data from the United States (from subjects in the Elgin Constitutional Study), are shown in Table 61.

It is evident from the table that the general situation revealed in the American study is very similar to that presented in the India and China data. The relative order of component

TABLE 61  
SOMATOTYPES AND PSYCHOSES ACCORDING TO DIAGNOSIS  
IN THE UNITED STATES, INDIA, AND CHINA\*

PSYCHOSIS TYPE	UNITED STATES		INDIA		CHINA	
	Cases	Av. Somatotype	Cases	Av. Somatotype	Cases	Av. Somatotype
Cycloid.....	31	{Endomorphy 4.76 Mesomorphy 4.68 Ectomorphy 2.12}	10	{3.20 5.25 2.10}	5	{2.70 4.70 2.90}
Schizophrenic (excluding paranoid)	57	{Endomorphy 3.13 Mesomorphy 2.61 Ectomorphy 5.21}	17	{2.85 2.73 4.79}	7	{3.36 3.00 4.29}
Paranoid.....	44	{Endomorphy 3.25 Mesomorphy 4.30 Ectomorphy 3.66}	3	{2.33 4.50 3.50}	1	{2.50 4.00 3.50}

\* Seven paranoid schizophrenics of the 50 Asiatic psychotics are excluded because the Elgin Study did not have a category for their kind of case. Those 7 have the following average somatotype components: endomorphy, 2.57; mesomorphy, 3.57; ectomorphy, 4.36. Thus they fall between the schizophrenic and paranoid groups of this table.

strength is the same in all three cultures for the schizophrenic and paranoid cases; in the cycloids the low ectomorphy and the strong mesomorphy stand out prominently.<sup>29</sup>

29. The main difference is the variation in endomorphy in the cycloid cases. This is perhaps partly the result of the much lower average endomorphy in the India and China samples than in the American sample, and perhaps partly due to the circumstance that only 7 per cent of the cycloids in the Asiatic groups were classed as depressed while 44 per cent of the United States group were so classified. According to the Elgin Study data, the depressed cycloids average higher in endomorphy and lower in mesomorphy than do the manic cycloids. If the manic cycloids in the United States sample are compared with the Asiatic cycloids, then in all three cultures the relative order of mesomorphy and endomorphy would be the same for the cycloid groups. Figures on this are given in the 1951 report cited above.

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To revert to the hypothesis, if cycloid behavior is low in detachment, schizophrenic behavior low in dominance, and paranoid behavior low in dependence, and if detachment goes with ectomorphy, dominance with mesomorphy, and dependence with endomorphy, then the means for ectomorphy should be low for the cycloid group, the means for mesomorphy should be low for the non-paranoid schizophrenic group, and the means for endomorphy should be low for the paranoid group. Table 61 indicates that this is true for all three cultures. This gives some evidence that the results obtained in the United States hold

TABLE 62  
CLASSIFICATION OF ASIATIC PSYCHOTICS BY SOMATOTYPE GROUP\*

Psychotic Type	Endo- morphs	Meso- morphs	Ecto- morphs	Balanced
Cycloid (15).....	2	12	0	1
Schizophrenic (24) (ex- cluding paranoid).....	5	2	17	0
Paranoid schizophrenic (7).....	0	1	4	2
Paranoid (4).....	0	3	1	0
Total (50).....	7	18	22	3

\* The balanced cycloid in this table was equal in endomorphy and mesomorphy; the two balanced paranoid schizophrenics were equal in mesomorphy and ectomorphy.

across cultures and further evidence that Sheldon's temperament categories are related to Categories I, II, and III.

The data may also be looked at in terms of the number of endomorphs, mesomorphs, and ectomorphs falling within the various psychotic groups. The data from the Elgin Study did not contain this information. But in the Asia samples no ectomorph was found in the 15 cycloid cases, only two mesomorphs appeared in the 24 non-paranoid schizophrenic cases, and no endomorph was listed among the 11 persons classified as paranoid or paranoid schizophrenic. The data are shown in Table 62.

Many of the differences presented in Tables 61 and 62 are of high statistical significance, especially in the opposition of the cycloid and schizophrenic groups. They support the view that



the Categories and some of the value factors appear even at the biological level. These are more closely linked with somatotype in the psychotics than in the students. The students are still experimental, still socially interacting, not finally committed; the psychotic has found his way of life. In distress he has fallen back upon his most fundamental biological resources and grossly exhibits what in the normal individual is but direction and tendency.<sup>30</sup>

30. It may perhaps be added that in the Elgin Study the mixed-psychoses were characteristic of the less extreme somatotypes. This parallels the remarks made in sec. 7 concerning the mid-range physiques in relation to the ratings of the Ways.

## *A Study of Paintings*

### 1. TWENTY PAINTINGS

In this chapter a miniature analysis of the ratings of paintings, an analysis similar to that made of the ratings of the Ways in the preceding chapters, introduces a non-verbal source of data serving as a check on the results gained from the verbally formulated "Ways To Live." In asking whether a comparable rating scale, similar value dimensions, similar relations to social, psychological, and biological determinants exist, the order of treatment of these issues is somewhat altered. A brief discussion of scales is followed by a consideration of the ratings of the paintings from biological, psychological, and cultural perspectives, and the discussion is concluded by a consideration of the relation of the paintings to the Ways.<sup>1</sup>

Standard "letter-size" colored reproductions of the paintings were mounted on white cardboard, with the names of the painters and the paintings removed. The first set consisted of eighty-seven paintings chosen to exhibit a marked range of content and style. No aesthetic considerations were used in the selection. In the course of time twenty pictures were selected from the original set. The works are predominantly "modern" rather than "classical," but all have a recognizable subject matter. A few pictures that were generally liked were included, and a few that were generally disliked; the rest were for the most part pic-

1. A preliminary report on this material was given in a short paper "Significance, Signification, and Value," in *Symbols and Values*, ed. L. Bryson *et al.* (1954); also in *Methodos*, V (1959), 87-102. A longer version appears in *The Language of Value*, ed. Ray Lepley (1956); it supplements in certain respects the present treatment.

tures for which there was a considerable range of liking and disliking. Thus the final set is by no means a random sampling of paintings.

The same seven response categories were used as in the ratings of the Ways, numbered from 7 to 1, and ranging from "like very much" to "dislike very much." The raters were instructed not to judge the pictures as works of art but simply to express their own degree of liking or disliking of each picture. For the most part the pictures were shown one at a time to small groups

TABLE 63  
MEAN RATINGS OF TWENTY PAINTINGS (109 MEN)

Painting Number	Artist and Title	Mean Rating
20.....	Vermeer's "The Milkmaid"	5.35
9.....	Renoir's "Self-Portrait"	5.28
5.....	Manet's "Le Bon Bock"	5.03
52.....	Crawford's "Overseas Highway"	4.95
39.....	Marsh's "High Yaller"	4.87
83.....	Van Gogh's "The Starry Night"	4.74
59.....	Cézanne's "Stockade"	4.72
13.....	Kroll's "Figure Outdoors"	4.66
30.....	Rousseau's "The Waterfall"	4.61
18.....	Curry's "John Brown"	4.60
77.....	Bellows' "Stag at Sharkey's"	4.56
37.....	Corbino's "Flood Detail"	4.44
85.....	Rouault's "Christ Mocked by Soldiers"	4.43
1.....	Picasso's "Two Harlequins"	4.41
28.....	Seurat's "The Circus Parade"	4.30
2.....	Lautrec's "Portrait of Dethomas"	4.29
6.....	Modigliani's "Woman with a Necklace"	4.07
87.....	Redon's "Vase of Flowers"	3.96
79.....	Klee's "The Twittering Machine"	3.57
47.....	Monet's "Carnival"	3.46

of subjects, though in some cases subjects went through the set individually, turning up another picture only after one was rated. In no case were two or more pictures simultaneously visible. After a rating was made, it was not subject to change. The order of exhibition of the pictures varied from group to group.

The list of the paintings, in the order of their mean ratings for 109 male college students, is shown in Table 63. Standard deviations range from 1.12 for picture 9 to 1.81 for picture 1;

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the average standard deviation is 1.51. Henceforth in this chapter the paintings are referred to simply by numbers.<sup>2</sup>

### 2. RATING SCALE OF THE PAINTINGS

The psychological scale determined from the ratings of the twenty paintings has marked similarity to the scale obtained from the ratings of the Ways. The cumulative upper boundaries for the rating categories 2, 3, 4, 5, and 6 are for the two scales respectively .76 and .71, 1.26 and 1.20, 1.78 and 1.63, 2.41 and 2.29, 3.11 and 3.12. The lengths of the intervals differ less on the painting scale than do the intervals on the Ways scale. Since the two scales are similar, the remarks made in chapter ii about the scale for the Ways apply to the scale for the paintings. Hence the ratings for the paintings can be used for many purposes as if they were ratings on an equal interval scale. And it is for many purposes methodologically legitimate to compare statistically the ratings of paintings with those of the Ways.

### 3. VALUE DIMENSIONS AND PAINTINGS

At this point it would be appropriate to make a factor analysis upon the combined set of thirteen Ways and twenty paintings, for it would show whether the paintings introduced new value dimensions and also determine the relation of individual Ways and individual paintings. Unfortunately, most of the painting data were gathered at an early stage of the project before the "Ways To Live" document was in final form. Hence the correlations between the ratings of Ways and paintings which a factor analysis would require are not available for a large enough number of subjects to justify the analysis.

Nevertheless, it is possible in a less direct fashion to see something of the relation between the value dimensions and the paintings by the use of Categories I, II, and III, for we have already studied the relation of the Categories to the value fac-

2. The rank order for 38 college women is to a considerable extent similar to that of the men. There is, however, a great difference on painting 1, which is in second place for the women and in fourteenth place for the men. The women also rank 6 and 87 noticeably higher than the men, and 18, 59, and 77 noticeably lower.

tors (see chap. ii, sec. 10). For this purpose fifteen students were asked to indicate on a scale of 7 to 1 how strong each of the pictures seemed to them in the Categories, thus doing for the paintings what had been done for the Ways (Table 3). The averaged results are presented in Table 64.

None of the fifteen judges complained of any special difficulty in performing the task, though the average disagreement on

TABLE 64  
RANK ORDER OF MEAN RATINGS OF TWENTY PAINTINGS IN  
TERMS OF THE CATEGORIES (15 JUDGES)

Painting	I	Painting	II	Painting	III
6.....	5.88	37.....	6.47	1.....	5.93
87.....	5.80	77.....	6.40	52.....	5.55
85.....	5.60	18.....	6.20	79.....	5.40
59.....	5.55	39.....	5.21	28.....	4.88
5.....	5.33	47.....	4.94	2.....	4.74
20.....	5.33	83.....	4.47	30.....	4.74
13.....	5.21	20.....	3.80	85.....	4.74
1.....	5.14	2.....	3.67	5.....	4.60
30.....	5.00	5.....	3.33	9.....	4.54
9.....	4.60	9.....	3.33	59.....	4.47
83.....	4.40	28.....	3.20	20.....	4.47
2.....	4.27	52.....	3.14	87.....	4.40
79.....	3.94	79.....	3.00	83.....	4.34
28.....	3.73	13.....	2.53	6.....	4.20
39.....	3.60	59.....	2.27	13.....	3.74
52.....	3.54	30.....	2.00	47.....	3.46
47.....	3.40	1.....	1.94	39.....	3.14
37.....	2.66	87.....	1.67	77.....	2.87
77.....	2.60	85.....	1.67	18.....	2.13
18.....	2.13	6.....	1.53	37.....	2.00
Av....	4.39		3.54		4.22

the ratings was somewhat greater than in the corresponding analysis of the Ways.<sup>3</sup> The correlations between the numerical values of the items on the Categories were, however, very similar in the analyses of the Ways and the paintings. Hence it seems plausible that the value dimensions found in the ratings of the Ways are also present in the ratings of the pictures.

It does not follow that there are only three, or even only five,

3. The average standard deviation was 1.13 for the analysis of the Ways and 1.48 for the paintings. In each case the figure is largest for Category III and smallest for Category II. The standard deviations for pictures of persons tend to be lower than those for landscapes.

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dimensions of value involved in the ratings of the paintings. A factor analysis might uncover more. But on this point it is suggestive that Dr. Jean M. Cardinet, using many more subjects and many more pictures, found only three clusters of characteristics of the pictures determining the subjects' preferences.<sup>4</sup>

### 4. PAINTINGS AND SOMATOTYPES

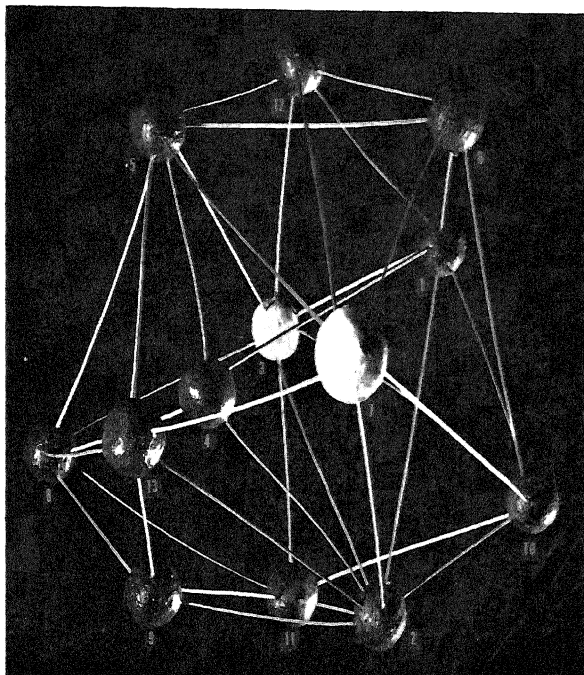
The suggested similarity (and possible identity) of the value dimensions underlying the ratings of paintings and Ways would be made more evident if preferences for paintings showed similarities to preferences for the Ways with respect to biological, psychological, and cultural determinants of value. The relation of the ratings to somatotype groups is pertinent to the subject.

Table 65 shows the mean ratings for the twenty paintings for four male somatotype groups. Those persons in the mesomorphic and ectomorphic groups had a minimum component strength of 5 on a 7-point scale; in the endomorphic group a mere predominance of the endomorphic component was the criterion for admission; the mid-range group is composed of persons who have a component strength of 3 or 4 in all components. The numbers are those of the paintings.

The rank orders in the columns in Table 65 differ much more than in the case of the Ways, suggesting that individual differences express themselves much more freely in the arts than in conceptions of the good life. Except for a few commonly liked or disliked pictures, and neglecting the mid-rangers, the pictures favored in one somatotype group tend to be among the pictures low in favor in the other somatotype groups.

When the rank orders of the paintings in the three columns of Table 64 are correlated with the corresponding rank orders

4. Cardinet, "Esthetic Preferences and Personality" (Ph.D. dissertation in psychology, University of Chicago, 1952). Dr. Cardinet used 180 subjects, each expressing a preference for a picture in 250 pairs of pictures. It is my impression that two of his clusters agree quite well with the characteristics of pictures high in two of the three Categories of the present study and that the agreement of the third cluster and the third Category is not bad, the difference resulting, I believe, from the fact that his set of pictures included both classic and modern pictures while the present set is almost completely formed from modern paintings.



Photograph of the structure of values from physical model. This photograph will be explained on page 202.



*Art Institute of Chicago, Charles H. and Mary F. S. Worcester Collection*

Amedeo Modigliani's "Woman with a Necklace," painting 6, high in Dependence (or Receptivity), with secondary strength in Detachment, and low in Dominance.





*Museum of Modern Art Collection*

Georges Rouault's "Christ Mocked by Soldiers," painting 85, high in Dependence (or Receptivity), with secondary strength in Detachment, and low in Dominance.



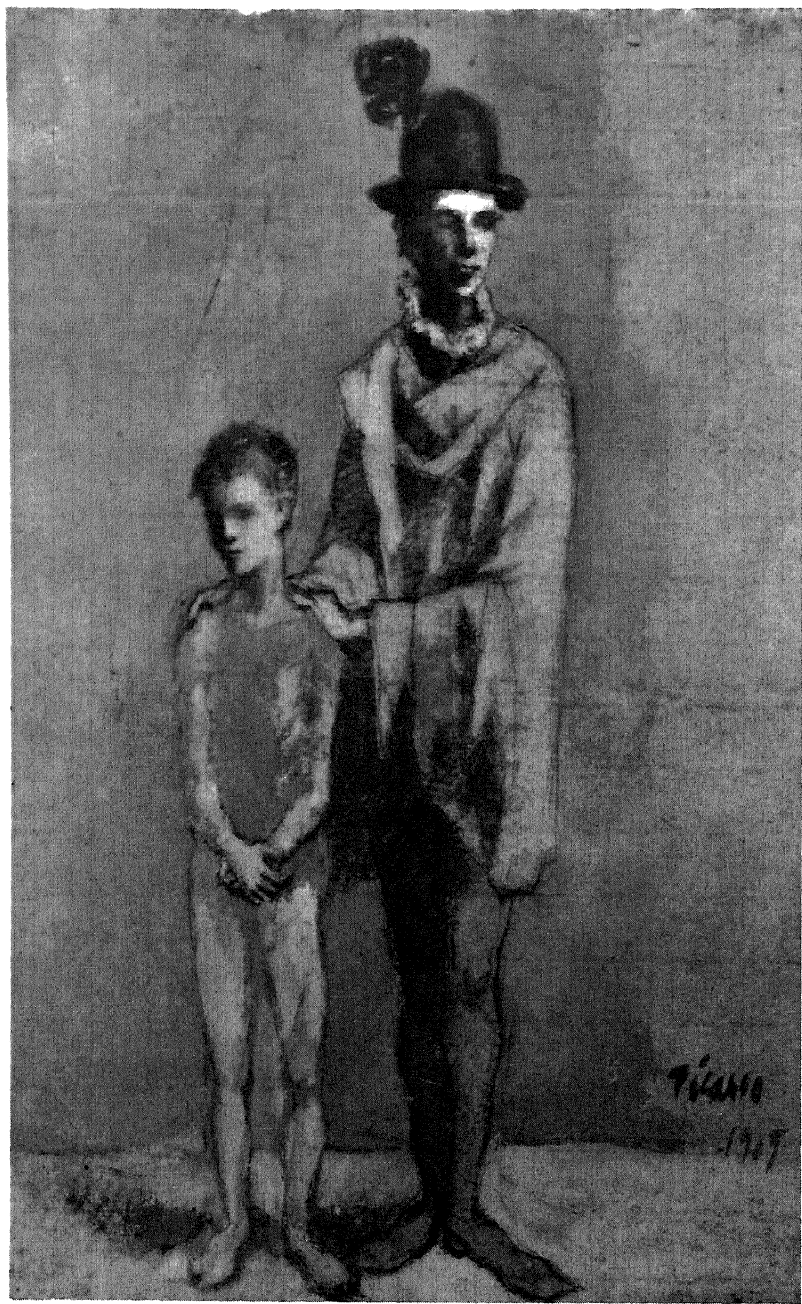
*Brooklyn Museum Collection*

Jon Corbino's "Flood," painting 37, high in Dominance, low in Dependence and Detachment



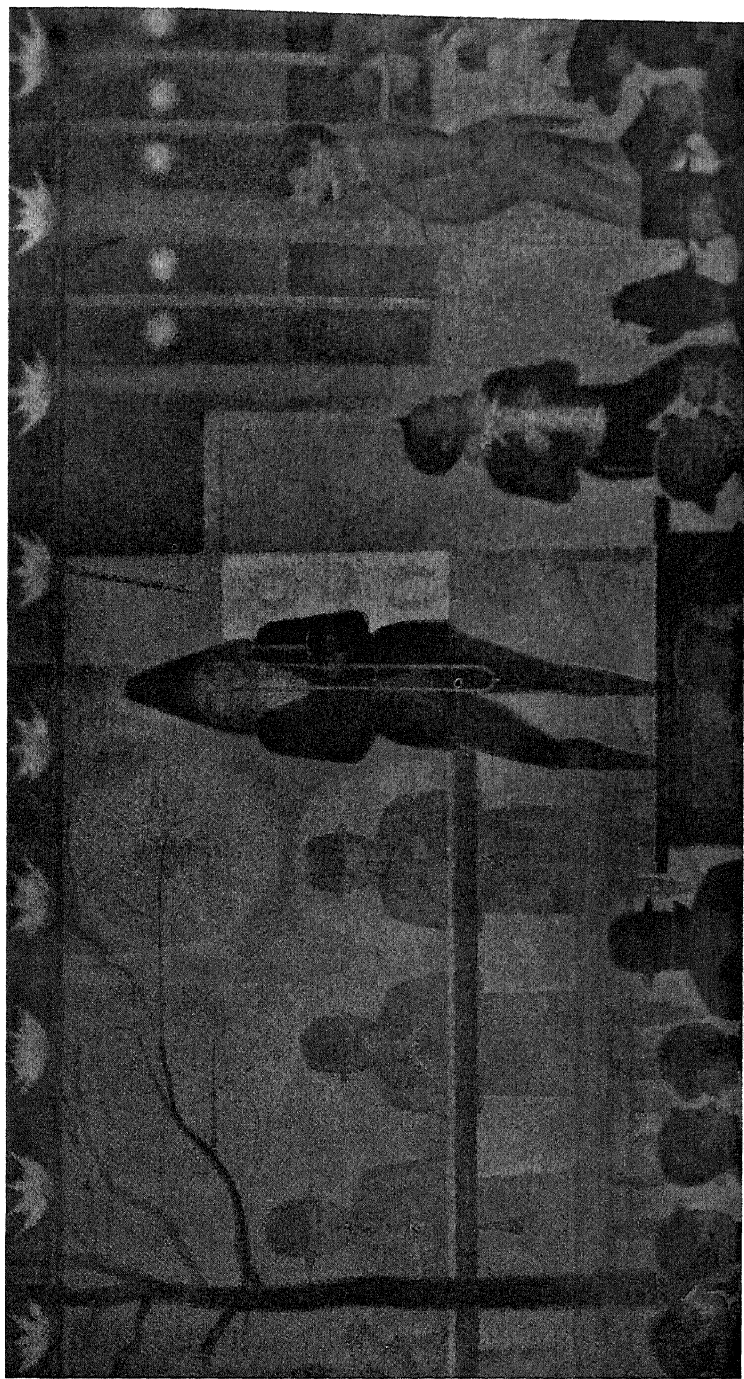
*Cleveland Museum of Art, Hinman P. Hurlbut Collection*

George Bellows' "Stag at Sharkey's," painting 77, high in Dominance, low in Dependence and Detachment



*New York Graphic Society and Stephen C. Clark*

Pablo Picasso's "Two Harlequins," painting 1, high in Detachment, with secondary strength in Dependence, and low in Dominance.



*Arlex Print, Inc., and Stephen C. Clark*

Georges Seurat's "The Circus Parade," painting 28, high in Detachment, with secondary strength in Dependence, and low in Dominance.





in the first three columns of Table 65, the larger positive rank-order correlations are as follows: endomorph and Category I, .61; mesomorph and Category II, .54; ectomorph and Category III, .51. The remaining rank-order correlations either approach

TABLE 65  
TWENTY PAINTINGS RANKED IN ORDER OF MEAN RATINGS  
IN FOUR SOMATOTYPE GROUPS

Endomorphs (N=7)	Mesomorphs (N=38)	Ectomorphs (N=30)	Mid-rangers (N=15)
85 (6.25)	39 (5.32)	20 (5.60)	9 (5.73)
87 (6.00)	20 (5.21)	52 (5.03)	5 (5.26)
13 (5.71)	9 (5.16)	1 (5.00)	59 (5.13)
20 (5.71)	5 (5.11)	9 (4.97)	20 (5.13)
9 (5.71)	18 (5.00)	30 (4.90)	13 (4.87)
59 (5.57)	77 (4.94)	5 (4.90)	52 (4.80)
83 (5.50)	52 (4.94)	39 (4.77)	83 (4.50)
39 (5.14)	83 (4.67)	28 (4.73)	18 (4.47)
52 (5.00)	13 (4.58)	2 (4.67)	39 (4.40)
5 (4.91)	37 (4.58)	59 (4.63)	77 (4.40)
30 (4.86)	30 (4.53)	83 (4.57)	30 (4.20)
6 (4.86)	59 (4.37)	13 (4.50)	85 (4.17)
28 (4.71)	28 (4.32)	85 (4.36)	37 (4.13)
77 (4.43)	85 (4.23)	18 (4.23)	6 (3.87)
37 (4.29)	6 (4.21)	37 (4.23)	2 (3.80)
79 (4.25)	2 (4.18)	77 (4.03)	1 (3.80)
18 (4.14)	1 (4.16)	79 (3.93)	87 (3.67)
1 (3.86)	47 (3.84)	6 (3.93)	28 (3.53)
2 (3.86)	79 (3.66)	87 (3.64)	47 (2.93)
47 (3.00)	87 (3.58)	47 (3.20)	79 (2.67)
Means 4.89	4.53	4.49	4.27
Av. SD 1.53	1.42	1.55	1.52

zero or are negative.<sup>5</sup> No significant rank-order correlation occurs between the order of liking by the mid-range physiques and

5. These figures give further evidence of a certain similarity between Categories I, II, and III and Sheldon's categories of viscerotonia, somatotonia, and cerebrotonia. According to Sheldon (*The Varieties of Temperament*, p. 400), the correlation of endomorphy and viscerotonia is .79, the correlation of mesomorphy and somatotonia is .82, and the correlation of ectomorphy and cerebrotonia is .83. Since these correlations are in the same direction as those given in the text (though higher), a relation is indicated between the Sheldon categories and dependence, dominance, and detachment. Product-moment correlations between endomorph means (Table 65) and the means according to Category I (Table 64), and likewise between ectomorph means and Category III, are considerably higher than the rank-order correlations given in the text, but then the product-moment correlation between mesomorph means and Category III does not quite reach an acceptable level of significance.

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the rank orders in terms of the Categories. The three pictures best liked in the total sample (5, 9, and 20) and the least liked picture (47) are not markedly favored by one somatotype group more than another.

In all these respects the somatotype groups react in a similar manner to the Ways and to the paintings, considered in terms of the Categories. This strengthens the position that the value dimensions operative in the ratings of the pictures are the same, or much the same, as those operative in the ratings of the Ways. The paintings seem to be portraying values of the same sort that the Ways extol. The comparison of the specific contents of Ways and paintings is the topic of a later section.

That the relation between the pictures described in terms of the Categories and the liking of the pictures by the three main somatotype groups is a close one can be seen by comparing the means for pictures in Table 64 with the corresponding means in Table 65. The pictures whose highest means are found in the Category I column of Table 64 are 5, 6, 9, 13, 20, 30, 59, 85, 87; these pictures have also their highest means in the endomorph column of Table 65, except for 5 and 30. The pictures whose means are highest in the Category II column of Table 64 are 18, 37, 39, 47, 77, 83; these pictures have also their highest means in the mesomorph column of Table 65, except for 83. The pictures whose highest means are found in the Category III column are 1, 2, 28, 52; these pictures have also their highest means in the ectomorph column. In general the various somatotype groups differentially favor pictures which portray persons and situations congenial to their respective favored modes of action.

### 5. THE PROBLEM OF RELIABILITY

The relation of ratings of paintings to somatotypes was used as one means of seeing whether the value dimensions uncovered in the Ways also appear in the paintings. As a check on the reliability of the results reported in the previous section, the study was repeated with a small group of thirty-five persons, four predominantly endomorphic, sixteen predominantly meso-



morphic, fifteen predominantly ectomorphic.<sup>6</sup> These persons rated the same twenty pictures used for the first group. The mean ratings and the rank orders of the mean ratings for the three somatotype groups were compared with those obtained in the larger study already reported.

The mesomorphs proved most stable. The correlation between the mean ratings of the two mesomorphic samples is .77, and there are no gross discrepancies in likings. In terms of rank order, pictures 1, 2, and 28 have moved up considerably in the second sample, and 18 and 39 have dropped somewhat. There is thus more detachment in the second sample and less dominance. But 37, 39, and 77 are in both cases favored more strongly by the mesomorphic group than by the other somatotype groups. The general similarity is evident.

The same is true on the whole for the two ectomorphic groups. The correlation, however, is now only .59, and there are several large discrepancies: 2 and 5 have dropped ten ranks in the second sample. Otherwise the order remains quite constant. In both sets 28 and 52 have a higher rank for the ectomorphic groups than for the other somatotype groups; 1 is given a rank much higher than the one given to it by the mesomorphs; both ectomorphic groups agree in their main dislikes, except for 2.

The endomorphs, as usual, vary most widely. The correlation of the mean ratings of the two endomorphic groups is now only .33, and not significant. However, the discrepancy is due largely to 1 and 87. In the second sample 1 has moved up sixteen ranks, and 87 has dropped the same number. Except for these glaring discrepancies the rank orders are much the same. When 1 and 87 are omitted the correlation is .70. Both endomorphic groups agree in the high place given to 85 and the low places given to 18, 37, and 77.

Since the two endomorphic groups are small, there is not much point in trying to rationalize the discrepancies, but it is perhaps worth mentioning that of the four endomorphs in the second sample three were personally interested in painting, one

6. The mesomorphs and ectomorphs all had a component strength of 5 or more in their dominant component; only one person predominantly endomorphic reached a 5 in endomorphy.

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being a professional painter. When twenty-four judges appraised the twenty pictures in terms of their aesthetic value,<sup>7</sup> picture 1 was given a high rank (5) while 87 was given a low one (18). Hence it may well be that aesthetic considerations played an important part in the second endomorph sample. Because as the aesthetic interest develops, individual differences play a diminishing role in the ratings, future studies ought to control this factor more carefully.

It would seem on the whole that the second study provides some evidence for the general reliability of the first study, but since considerable variation was found, the problem cannot be regarded as settled.

### 6. THE PROBLEM OF VALIDITY

Because the basic set of twenty paintings is not a random sample, it is legitimate to wonder if other paintings would yield similar results. To obtain evidence on this point the persons who rated the original set were asked to rate twenty additional paintings selected by the use of a table of random numbers. This second set of pictures does not seem to represent extremes of the Categories as sharply as did the first set, though since the second set was not rated in terms of the Categories by a group of judges, this must remain an opinion. Nevertheless, there is some evidence that the second set of paintings exhibits the Categories, in a similar relation to physique, as did the paintings in the original set.

This is certainly true of Category II (dominance). The pictures most clearly stressing power and action (Groppers' "Com-

7. On the whole, the order in which the twenty-four judges appraised the paintings as works of art showed considerable similarity to the order in which they liked the pictures (the rank-order correlation was .65). Nevertheless, there were some noticeable differences: pictures 52, 59, and 79 were given a considerably higher rank in terms of liking than in terms of aesthetic worth, while the reverse was true for pictures 2, 5, and 77. The five pictures appraised most highly by the judges were, in order, 9, 20, 85, 2, and 1; the five pictures appraised as being the lowest in aesthetic worth (ranks 16 to 20) were 59, 28, 87, 30, and 47. The judges were students, and most of them had no special knowledge of, or concern for, paintings. Yet the average standard deviation for the paintings was 1.46, somewhat less than in the ratings of the Ways. Further discussion of the appraisals of the pictures is found in chap. viii in the context of another problem.

bat," Palmer's "Controlled Medicine," and Degas' "Jeunes Spartiates s'exerçant à la Lutte") are distinctively favored more by the mesomorphic group than by the other groups.

The pictures which seem most like those high in Category I in the original set (Modigliani's "Dr. Deveraigne," Renoir's "Les Grands Boulevards," Pickett's "Manchester Valley") are favored by the endomorphic group. The three pictures differentially favored by the mesomorphic group are all differentially disliked by the endomorphic group.

There is no picture seemingly similar to those pictures in the first set that were rated high in Category III, and no picture is differentially favored by the ectomorphic group. The dislikes of the ectomorphic group are, however, clearly in the direction indicated in the main study. "Combat," "Controlled Medicine," "Dr. Deveraigne," and "Manchester Valley" are all differentially disliked, while "Jeunes Spartiates" is rated lower than by the mesomorphs and "Les Grands Boulevards" is rated lower than by the endomorphs.

The set of twenty randomly selected paintings offers some evidence that the results obtained in the main study are not ascribable simply to the original set of paintings. It is to be expected that the value structure would stand out more clearly in the first study, since the paintings were deliberately selected in terms of great variations in the ratings given to them.

## 7. TEMPERAMENT AND THE LIKING OF PAINTINGS

The general relation of temperament to preferences for paintings is not the problem here.<sup>8</sup> The present study concerns the specific question whether differences in the value dimensions as expressed in paintings are congruous with the temperaments of those who favor the paintings.

8. In Cardinet's study three clusters in the domain of aesthetic preferences and four clusters of temperament traits are isolated. The two groups of clusters are shown to be different and yet related. The expansive person is said to dislike rigid forms and to like emotional expression in pictures; vigorous persons to prefer naturalistic representations; introverted persons to prefer pictures with strong emphasis upon form and order, modern paintings to classical ones; and socially extroverted persons to prefer warm-colored, expressionistic paintings. Correlations are given between specific characteristics of paintings and specific temperament traits (including those in the *Thurstone Temperament Schedule*). Earlier work in this field is reviewed, and its direction largely confirmed.

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For this purpose a comparison was made between scores on the Thurstone temperament factors and the liking of ten selected paintings. Three of these paintings were high in Category I (6, 85, 87), three high in Category II (18, 37, 77), and three high in Category III (1, 28, 52); the tenth picture (20) was not extreme in any of the Categories. On each picture the average score on the temperament factors was computed for those who rated the picture a 7 or a 6. The scores were then grouped according to the three-category classification. Table 66 gives the results. A '+' indicates that the temperament score in question is noticeably higher than the average score for the

TABLE 66  
TEMPERAMENT DIFFERENCES OF PERSONS LIKING  
PAINTINGS HIGH IN THE CATEGORIES

Category	Paintings	N*	Active	Vigorous	Impulsive	Dominant	Stable	Social	Reflective
I.....	6, 85, 87	21	—	(—)	—	.....	—	(+)	—
II.....	18, 37, 77	34	.....	+	+	+	—	.....	(—)
III.....	1, 28, 52	44	+	.....	+	.....	—	(—)	+

\* The N refers to the number of 6- and 7-ratings given to the pictures in a group, not to the number of subjects.

group as a whole on that trait; a '—' indicates that the temperament score is noticeably lower than the average group score. The difference is smaller in the case of items put in parentheses.

The results are in general conformity with the view that temperamental differences are reflected in the liking for paintings grouped according to the Categories, or according to value dimensions. Several points, however, deserve mention. That those persons who like 1, 28, or 52 should be above the average group score on Active occasions some surprise, but it ought to be remembered that Active does not mean Vigorous. Further, picture 52 alone accounts for the above-average score on Active; if only 1 and 28 are considered, the score on Active is slightly less than the group average. It is also to be noted that in all three groups of pictures the score for Stable is lower than for the group as a whole. The people who dislike these nine pictures

have a much higher average score for Stable than do those who like the pictures. This is what one would expect, since these pictures are extremes with respect to value dimensions. Picture 20, however, is not extreme on any dimension, and the group of persons who like it do not differ much in temperament scores from the average temperament scores of the total group (the one exception is the appreciably lower rating on Active).

On the basis of previous evidence of a connection between physique and temperament and between physique and the liking of paintings, it is not unexpected that there is a connection between temperament and the liking of paintings. Nevertheless, the fact that such a relation is indicated in the data adds one more piece of evidence for the view that the structure of values represented in the paintings is the same structure embodied in the Ways.

#### 8. CHINESE AND INDIAN RATINGS

The relations between preferences for paintings and individual differences found in the American material hold also to some extent in China and India. However, cultural diversities make themselves felt here as elsewhere. The material to be presented is too fragmentary to support much generalization, but it may serve to illustrate the problems encountered in a comparative study of values as embodied in paintings.

Chinese and Indian students, men and women, were asked to rate eleven paintings used in the United States study.<sup>9</sup> Seven of these appear in the set of twenty paintings with which we have been concerned; the four others, numbered as 4, 42, 63, and 76, are Bellini's "The Doge," Sloan's "Main Street—Gloucester," El Greco's "View of Toledo," and Renoir's "La Grenouillère." The means, for men only, are found in Table 67.

The average rating of the pictures is noticeably lower for the Chinese than for the other groups. Since this was not true of the ratings of the Ways, it seems that the set makes a lower appeal to the Chinese subjects. The pictures best liked by the Chinese

9. The Chinese students also rated a set of Chinese paintings, and the Indian students rated a set of Indian paintings as well as the Chinese and Western sets; but it is not feasible to analyze the material here.

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are 13 and 59, and these are low in Category II (dominance), while 37 and 39, high in II, are given low ratings. Because the Ways high in dominance were rated highly by the Chinese, there is a discrepancy between the values revealed in the ratings of the Ways and the paintings. Perhaps the ratings simply follow the Chinese traditions in painting, for Chinese paintings seldom stress vigorous action. Or perhaps the stress on action in the Ways is primarily situational, while the painting preferences accord more closely with the underlying character of the stu-

TABLE 67  
MEAN RATINGS OF ELEVEN PAINTINGS IN CHINA, INDIA,  
AND THE UNITED STATES

Number	Painting	China (N = 85)	India (N = 89)	U.S.A (N = 90)
4 . . . . .	Bellini's "The Doge"	3.50	4.40	4.91
39 . . . . .	Marsh's "High Yaller"	2.84	3.48	4.97
1 . . . . .	Picasso's "Two Harlequins"	2.98	3.36	4.36
6 . . . . .	Modigliani's "Woman with a Necklace"	2.72	3.56	4.10
37 . . . . .	Corbino's "Flood Detail"	3.86	4.54	4.37
59 . . . . .	Cézanne's "Stockade"	5.02	5.25	4.68
30 . . . . .	Rousseau's "The Waterfall"	4.26	5.09	4.62
13 . . . . .	Kroll's "Figure Outdoors"	5.18	5.20	4.69
42 . . . . .	Sloan's "Main Street—Gloucester"	4.21	4.37	4.62
76 . . . . .	Renoir's "La Grenouillère"	4.81	4.63	4.50
63 . . . . .	El Greco's "View of Toledo"	4.88	5.57	5.14
Mean	.....	4.02	4.50	4.63

dents. Or perhaps the pictures do not portray the type of socially constructive action stressed in the favored Ways. The data available do not permit a choice among such interpretations.

The Indian ratings of the paintings have a high correlation ( $r = .88$ ) with the Chinese ratings, though the average rating is considerably higher in the Indian group. The Chinese and Indian ratings both have low correlations with the United States ratings.<sup>10</sup> What is the main source of this difference?

10. The D between China and India is 1.95, the D between India and the United States is 2.21, and the D between China and the United States is 3.38. This is the same order as the D's between the cultures computed from the scale values of the Ways (Table 9), but the D between China and the United States is relatively much greater in the case of the paintings than of the Ways.

In Table 67 a difference of means of about .48 (assuming 1.60 as the standard deviation) is significant. In these terms pictures 4, 39, 1, and 6 are significantly higher in the United States sample than in the China and India samples, while 59, 30, and 13 are significantly lower than in India, and 13 lower than in China. The opposition here is evident: the pictures differentially favored by the United States students portray distinctive individuals, while the pictures favored by the Indian students, and to a less extent by the Chinese students, are landscapes in which people occur, if at all, simply as elements in the landscape. The average ratings for the two sets of paintings are shown in Table 68. All the differences in the first row are significant; in

TABLE 68  
CULTURAL DIFFERENCES: AVERAGE RATINGS  
OF TWO SETS OF PAINTINGS

Paintings	China	India	United States
4, 39, 1, 6 . . . .	3.01	3.70	4.58
59, 30, 13 . . . .	4.82	5.18	4.67

the second row only the difference between India and the United States is significant; the differences in the columns are significant for India and China but not for the United States. That the variations in ratings in the first four paintings are not constitutional is evidenced by the fact that the Chinese men as a group were constitutionally much closer to the American group than to the Indian students.

It is tempting, and certainly in part correct, to explain this divergence between East and West in cultural terms: Western man has emphasized individuality, while Oriental man has stressed man's embedment in the cosmos.<sup>11</sup> Certainly, the noted variations in the ratings of the pictures are intelligible in these terms.

Nevertheless, such an explanation cannot be pressed too far.

11. John K. Fairbank states: "Man has been in the center of the Western stage. The rest of nature has served as neutral background or as his adversary. Thus Western religion is anthropomorphic and Western painting anthropocentric" (*The United States and China*, p. 31).

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The main variations in rank order in the three groups hinge on the high United States ratings of paintings 4 and 39—and an Italian doge and an American Negress might well be subjects that would cause difficulties to Chinese and Indians. If these are omitted, paintings 13, 59, and 63 are high in rank order in all three groups, and paintings 1 and 6 are low. This suggests that certain works of art, like certain ways to live, have a greater or lesser range of appeal than others and call forth preference ratings that cut across cultural boundaries.

To complete the circle, one may note that constitutional factors, although not playing a uniformly consistent role in the ratings of the three groups, are still discernible. Thus if one compares the average somatotype components of those rating a picture 7 (men as well as women in this case) to the average of the somatotype components of the group in question, in all three cultures pictures 37 and 39 are above average in mesomorphy and 6 is below average, picture 1 is above average in ectomorphy and 6 is below, pictures 13 and 63 are above average in endomorphy and 1 and 37 are below. Although pictures such as 1 and 37 are much less liked by Chinese and Indian students than by students in the United States, the students who do like them in China and India show constitutional similarities to those who like them in the United States. The cultural diversities depress, but do not completely submerge, the biological differences.

### 9. WAYS AND PAINTINGS

The final topic of this chapter is the interconnection of Ways and paintings. One would expect that the liking of certain Ways goes with the liking of certain paintings, but as far as theory is concerned, the connection need not be a close one. For even if cultural and individual determinants are at work in both cases, the degree or direction need not be the same. In the case of China, for example, there is a discrepancy between the values exhibited in the favored Ways and those portrayed in the favored pictures. It is theoretically possible that in the arts a person gives expression to aspects of his value pattern that are not found either in his conceptions of the good life or in his ac-



tual behavior. There is no doubt that this does at times occur, at both the individual and the cultural levels, but it seems likely that in the main the value pattern revealed in the liking of paintings will be congruent with that expressed in the rating of the Ways. To show that this is so, at least for the American material, is the purpose of this section.

In the determination of the relation between liking of Ways and paintings, a count was made of the number of 7's or 6's and 1's or 2's given to the 24 pictures by the persons who rated a particular Way a 6 or 7. From the average number of 7's or 6's given to a picture by persons who liked a given Way was subtracted the average number of 1's or 2's given to that picture, and the resulting numbers were taken as indices of the relations between liking Ways and liking pictures. Table 69 shows which pictures were given the highest and lowest favor by persons who liked the various Ways. Thus the first line in Table 69 indicates that those who liked Way 1 quite a lot, or very much, favored picture 76 more and picture 30 less than did those who liked any other of the given Ways to the same degree.<sup>12</sup> It does not mean that those who liked Way 1 liked picture 76 more than any other picture.

A number of comments are in order. Way 12 was added in spite of the small number of cases, since no painting was given highest relative rank by those who liked Ways 5 and 6 (which with Way 12 characterize Factor B). Picture data on pictures 79, 83, 85, and 87 came from a much smaller group of subjects than the data on the other pictures, and so are not as trustworthy.

The set of pictures as a whole was liked most by those who liked Way 2, 4, 8, or 10 and was liked the least by those who liked Way 5 or 6. This is in general agreement with the ratings of the twenty pictures by the judges with respect to the Categories (see Table 64). According to these ratings, the twenty pictures are highest in Category I, slightly lower in Category

12. The main body of material on the paintings was collected at a time when only the first ten Ways were being used. Some later data on the other Ways were collected, but since neither Way 11 nor Way 13 received a rating of 7 or 6 in the group, they do not appear in Table 69. Way 12 received only six such ratings.

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III, and markedly lower in Category II. Hence the persons who liked Ways high in Categories I and III found the set as a whole more satisfactory than those who liked Ways 5 and 6, which are both high in Category II.

The best liked pictures were 5, 9, 20, and 63. Picture 63 was not rated by the judges in terms of the Categories, but 5, 9, and 20 were given neither high nor low ratings in terms of these categories. For the pictures, as for the Ways, the best liked

TABLE 69  
PAINTINGS FAVORED MOST AND LEAST BY PERSONS  
FAVORING VARIOUS WAYS

Way	Number of 7's or 6's	Paintings Given Highest Relative Rank	Paintings Given Lowest Relative Rank
1.....	61	76	30
2.....	30	1, 4, 6, 28, 52, 59, 63, 79	5, 42, 85
3.....	42	87	.....
4.....	27	83	37
5.....	18	.....	1, 4, 6, 9, 20, 28, 59, 63, 77
6.....	34	.....	13, 79, 83 (tie with Way 9)
7.....	97	.....	.....
8.....	31	2, 85 (tie with Way 12)	18
9.....	19	30, 47	39, 52, 76, 83 (tie with Way 6), 87
10.....	36	37, 42	.....
12.....	6	5, 9, 13, 18, 20, 39, 77, 85 (tie with Way 8)	2, 47

pictures are not extreme in any of the value categories. Conversely, the pictures liked least by the whole group tended to be pictures rated high in some one of the Categories.

The extreme opposition between Ways 2 and 5 is paralleled in the choice of pictures liked by the persons who liked those Ways. As can be seen from Table 69, a differential favor for pictures 1, 4, 6, 28, 59, and 63 was given by those who liked Way 2, while those who liked Way 5 differentially favored these pictures least of all. This sharp difference between the advocates of Ways 2 and 5 extends beyond the set of twenty-four pictures to the larger set of eighty-seven pictures.

A number of linkages in Table 69 are puzzling. There is cer-

tainly no simple uniform relation between liking a Way and liking a painting. Nevertheless, in the main the contents of the Ways liked are congruent with the contents of the pictures favored most by the advocates of the Ways.

Further evidence of this congruence may be obtained from Table 70. Here the Ways are grouped according to factors.<sup>13</sup> The entries in the successive columns are the average strengths, in terms of the Categories, of the Ways in the factor groups and of the pictures indicated in the two columns of Table 69. The generally liked pictures, 5, 9, and 20, and the generally disliked

TABLE 70  
CONGRUENCE OF CONTENT OF WAYS AND CONTENT OF  
PICTURES FAVORED BY THOSE WHO LIKE THE WAYS

FACTOR	AVERAGE STRENGTH OF WAYS IN FACTOR GROUP			AVERAGE STRENGTH OF PICTURES RANKED HIGHEST BY THOSE FAVORING WAYS IN FACTOR GROUP			AVERAGE STRENGTH OF PICTURES RANKED LOWEST BY THOSE FAVORING WAYS IN FACTOR GROUP		
	Category								
	I	II	III	I	II	III	I	II	III
B (Ways 5, 6, 12)...	2.26	6.28	1.64	3.83	4.40	3.00	4.96	3.22	4.33
C (Way 2).....	2.76	2.28	6.28	4.62	2.52	5.08	5.46	2.50	4.67
D (Ways 3, 9)....	6.31	1.41	3.50	5.40	1.83	4.57	4.30	3.62	4.35
E (Ways 4, 8).....	6.26	2.07	3.37	4.71	3.27	4.61	2.39	6.33	2.06

picture, 47, are omitted. A grouping for Factor A is not included, since of the three pictures that go with Ways 1 and 10 only one was judged in terms of the Categories.

As an example of reading this table, consider the entries in Factor E. Ways 4 and 8, included in Factor E, were judged (Table 3) to be high in Category I, low in II, and intermediate in III. Column 1 of Table 70 gives the averages. But the pictures differentially favored by those who like the Ways high in Factor E are also judged highest in Category I, lowest in II, and

13. Since Ways 11 and 13, for reasons already stated, were not included in this part of the study, Way 2 stands alone in the table for Factor C, and Way 3 is paired with Way 9 as a substitute for Way 13 on Factor D.

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intermediate in III, as seen in column 2. It is further seen in column 3 that the pictures least favored by those who like Ways 4 and 8 are pictures high in II and low in I and III.

In each factor group the order of strength of the Categories for the Ways (col. 1) is the same order as that for the pictures favored by those who like the Ways making up the factor group (col. 2). Thus there is definite congruence between the content of the Ways liked and the pictures favored by those who like the Ways. Stated in other terms, since the Categories are related to the value dimensions as defined by the factors, this means that the value structure represented in the favored Ways is the same, or very similar, to the value structure of the favored paintings.

It will be noticed that in Table 70 the entries for Factors D and E in the first six small columns are much the same. This is due to the fact that I, II, and III do not serve to differentiate Factors D and E. The entry of 4.40 under Factor B is much lower than would be expected, but it is due entirely to Way 12 (for reasons previously stated) and represents only six subjects. The entries at the right of the row (4.96, 3.22, and 4.67) clarify the situation by reference to the pictures not favored by those who like Way 5, 6, or 12: these are pictures low in II and higher in I and III.

It has been explained why a grouping by Factor A does not appear in Table 70. Yet here too the content of the pictures favored is congruent with the content of Ways 1 and 10. The differentially favored pictures for Ways 1 and 10 shown in Table 69 (37, 42, and 76) all portray groups of persons in social interaction in a recognizable realistic world, and except for picture 77 these are the only pictures in the set of twenty-four which have these characteristics, picture 77 being devoid of the social restraint and self-control central to Factor A. The low-favored picture (30), by contrast, lacks precisely the characteristics of the pictures differentially favored by those who like Way 1 or 10.

At the conclusion of the study of paintings, it can be said that results similar to those found in the study of the Ways have reappeared in the miniature analysis of the paintings.

## *Three Lesser Studies*

### 1. STATEMENT OF PURPOSE

In this chapter the results of three additional investigations are briefly noted. The first and second studies concentrate on the signification of the value terms 'good' and 'ought'; the third deals with the connection of philosophic beliefs and the value dimensions. These studies were made at an early stage of the project and leave much to be desired both as to empirical data and as to the methods employed. At best indicative of the importance of the problems they assail, they suggest hypotheses which merit further study. The inclusion of these topics helps also to round out the general program of this book; therefore they have been included in spite of their shortcomings.

### 2. EXPERIMENTAL SEMANTICS OF VALUE TERMS

The theory of value has a semiotical phase inasmuch as it must include an analysis of such value terms as 'good' and 'ought'. A complete analysis would cover the syntactics, semantics, and pragmatics of such terms, i.e., their grammar, their signification, and their uses and effects within conduct, but here only limited aspects of the signification of certain value terms are discussed.<sup>1</sup> The interest is more in the possibility of applying experimental methods in this domain than in the defense of specific results.

In attempting to find the signification of terms (or sentences), it is customary to ask questions of persons who employ the

1. For a discussion of semiotical aspects of value terms see Ray Lepley (ed.), *The Language of Value*.

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terms and to use their replies as evidence of what the terms under investigation signify. The person may be asked simply what a given term signifies to him, or he may be supplied with interpretations from which he is to choose those which most closely correspond to the signification of the term in question. When a number of persons are so queried, evidence can be obtained as to how far certain significations are interpersonal, what varieties of significations occur, and the like.

Such procedures are indispensable in meaning analysis and may be carried on with great precision.<sup>2</sup> They encounter, however, special difficulties in the case of value terms, partly because the whole question of what 'signification' itself means with respect to such terms is unclear at the level of ordinary discourse, and partly because the replies received tend simply to make use of variants of the same terms whose signification is under investigation. Hence there is a need for supplementary experimental methods in the determination of the signification of value terms which do not depend upon the utilization of the signification of other signs. The first two studies reported here were in part attempts to devise a method for studying the signification (or significations) of the terms 'good' and 'ought' without asking the persons using these signs to say anything whatsoever as to what these terms "meant" to them.

In what follows, 'the signification of a sign' means the properties something must have for the sign to apply to it. Do value terms have signification in this sense? Can one determine the conditions under which value terms are applied to something or other?

### 3. A-RATINGS

So far only one kind of rating has been used: the subjects have indicated their preferences for Ways or paintings by assigning to each one a number indicating the degree of their liking or disliking. Such ratings are henceforth called P-ratings

2. See Arne Naess, *Interpretation and Preciseness*, and the work of Charles E. Osgood, initiated in his paper "The Nature and Measurement of Meaning," *Psychological Bulletin*, XLIX (1952), 197-237. Osgood, George J. Suci, and Percy H. Tannenbaum have written a book entitled *The Measurement of Meaning*, now in press.

(preference ratings). The appraisals of an item in terms of degrees of goodness or badness are henceforth called A-ratings (appraisal ratings).

A number of students who had given P-ratings to the set of twenty pictures discussed in the preceding chapter were also asked to rate the pictures as works of art. In making these A-ratings the subjects had no access to their earlier P-ratings. The marks by which they were to indicate their appraisals were as follows:

- 7 It is very good
- 6 It is quite good
- 5 It is somewhat good
- 4 It is indifferent
- 3 It is somewhat bad
- 2 It is quite bad
- 1 It is very bad

For three groups of persons (of twenty-three, twenty-two, and eleven members) the average product-moment correlations between the subjects' P- and A-ratings were respectively .64, .65, .64. Thus we may take a correlation of .64 to be about the order of magnitude of the connection of P-ratings and A-ratings for these persons.

Prior to interpretation of the result, two points may be noted. The computing of correlations assumes that the scale of the A-ratings is the same as that of the P-ratings. The data available on this point give some evidence that the two scales are sufficiently alike to permit the computation of such correlations. By the same scaling technique that was used previously to compute the scale for the P-ratings of the Ways, twenty-four persons' A-ratings of twenty pictures were analyzed and compared with the scale found for the P-ratings of the same pictures. The intervals between the corresponding rating categories (from 2 to 6) of the A and the P scales are as follows: .52, .76; .45, .50; .59, .52; .63, .63; .75, .70. It will be noticed that the only serious discrepancy is in the first pair of figures (those for the rating of 2). Since less than 11 per cent of the A-ratings or the P-ratings were made in terms of the rating categories 2 and 1, it seems allowable to correlate the A-ratings and the P-ratings.

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Doubt may arise as to whether the A-ratings are not merely a second set of P-ratings rather than another type of rating. To settle this doubt one might compare the relation of two successive P-ratings of the same pictures with the relation of a P-rating and an A-rating of these pictures. The data at hand for this comparison are somewhat meager but seem to distinguish the two types of ratings. Two persons who had given P-ratings to 295 paintings were retested on 50 of them seven weeks later and also (together with a third person) eleven months later.<sup>3</sup> The average difference of the two P-ratings for a given item was .80, while the average difference of the P- and A-ratings for twenty-seven persons was 1.04, the standard deviations in the two cases being .11 and .36. That the difference of the two average differences is statistically significant supports the view that the A-ratings are a distinctive type of rating.<sup>4</sup>

### 4. THE NATURE OF APPRAISALS

What bearing does the correlation of .64 between A- and P-ratings have on the question as to the signification of the term 'good'? Or as previously formulated, what does it show regarding the properties something must have for the term 'good' to be applied to it?

It was seen in the preceding chapter that the P-ratings of the paintings tend to accord with the personality of the persons making the ratings. On the whole the paintings liked highly are those portraying a situation congenial to the dominant interests of the raters. Symbols satisfied if they represented situations that would satisfy.

The tendency to ascribe goodness to paintings given positive P-ratings suggests that the term 'good' signifies something in its capacity to give satisfaction to some interest. Such an interpretation would make intelligible the fact that every painting but painting 20 was positively appraised by some persons and negatively appraised by others. Just as interests differ, so the same object can have the capacity to give satisfaction to certain

3. This work was done by Richard C. Gedney.

4. The critical ratio is 2.86; therefore  $p < .01$ .



interests and not to give satisfaction to others. Thus disagreements in appraisal are not necessarily evidence against the view that the term 'good' has a common signification: diverse persons in virtue of the diversity of their interests can find different objects good and yet "mean the same" by the term 'good'.

If this interpretation be legitimate, the term 'good' has a semantic component. It does not merely express or name an existing liking but predicts of an object that it will be or would be found satisfying.<sup>5</sup> It therefore is related to what in chapter ii were designated as object values. Some objects, such as paintings or Ways, prove more satisfying to some, or even to all, persons under certain conditions than do others. This capacity to satisfy interests is, in a large sense of the term, a "property" of objects, and the term 'good' (together with such terms as 'better' and 'best') signifies on this interpretation such properties.

Nevertheless, the term 'good' differs in signification in two important respects from such a term as 'red'. It predicts nothing about an object that could be observed by the senses or by an instrument; the goodness is not a property co-ordinate with observable properties but a property of such properties, i.e., of their capacity to give satisfaction to some interest. Hence if a term like 'red' is said to designate, then the signification of the term 'good' is not a case of designation. Secondly, living beings seek objects that satisfy their interests, and so to signify an object as good is to arouse a tendency to favor and to seek out that object. By the same token, a term like 'good' can be used by a person in an attempt to direct the preferential behavior of another person (and of course his own preferential behavior). A term such as 'red' has no such constant relation to preferential behavior. It is true that if a person likes red objects he will tend to favor an object signified as red, but since other persons will not have this tendency, the term 'red' does not have an

5. The term 'satisfying' is here used without commitment to a particular psychological theory. It permits of either a behavioral or subjectivistic interpretation, or both together. The same is true of the term 'interest'. If one wished to talk in terms of preferential behavior, one could regard an interest as a tendency to preferential behavior and regard the satisfactoriness of an object as its capacity to permit actualization of the tendency.

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interpersonal or generic relation to preferential behavior as does the term 'good'.

For these two reasons it is convenient to call such a term as 'good' a value term to distinguish it from designative terms and convenient to say that its signification is appraisive rather than designative. Its possible relation to such a prescriptive value term as 'ought' will be touched upon in the second study.<sup>6</sup>

### 5. THREE ADDITIONAL PROBLEMS

Three further matters deserve consideration: the correlation of .64 for A- and P-ratings is not very high, and for some individuals it is much lower; the A-ratings of the pictures tend to be higher than the P-ratings; the correlation of the P- and A-ratings is higher for those interested in painting than it is for those not so interested.

The fact that the correlation goes no higher than .64 does not necessarily invalidate the view that for these subjects 'good' signifies the capacity of the paintings to give satisfaction to some interest. For a person can like something with respect to some interests and yet appraise it negatively with respect to other interests either in himself or in other persons. Persons whose point of reference in appraisals is themselves would be expected to show a closer relation between A- and P-ratings than persons whose point of reference is other than themselves, and something of the sort is indicated in the data. Ways 1 and 3 illustrate situations where the value center is found in the maintenance of society or in being helpful to others. The ratings of fifteen persons who gave these Ways first or second choice were compared with the ratings of seventeen persons who instead gave first or second place to either Way 2, 4, 6, 8, 11, or 12—Ways where the point of orientation is toward one's own

6. Of course, the correlation of .64 between A- and P-ratings does not in itself "prove" this interpretation of the term 'good'. This explication of the term was derived from earlier and non-experimental analyses (see *Signs, Language, and Behavior*, chap. iii); it merely seems that the present study gives some evidence for its tenability. The article in *The Language of Value* brings in some further considerations not introduced in the present discussion. The main point of this and the following study is to suggest that experiments can be designed to improve the present unsatisfactory state of the semiotic of value terms.

self. The average correlation of A- and P-ratings on the twenty paintings was .50 for the first group and .79 for the second.<sup>7</sup> Hence the likings and appraisals of those whose value-orientation was to society or other persons differed more than in the case of those whose orientation was toward themselves. Interest is the point of reference for the appraisals in both cases, but just as the interests with respect to which the appraisals are made differ, so the appraisals differ.

It has been stated that the A-ratings tend to be somewhat higher than the P-ratings of the paintings. It may be added that this holds true primarily for subjects who were not personally interested in painting as an art. For those genuinely interested in painting (either as students or as painters), there is surprisingly little variation between a given individual's average A-ratings and average P-ratings. But for those not so interested, the average A-ratings often exceed the average P-ratings, sometimes to a marked degree. Perhaps these persons, being unsure of their judgment, assign higher A-ratings on the general conviction that the paintings as works of art which have in fact been reproduced must be good even if they personally do not like them very much. Whatever the explanation of this, it gives one more reason why the correlation of A- and P-ratings was not higher.

In all of the three groups used in this study the average correlations of the P- and A-ratings were higher for those who had an active interest in painting than for those without this interest. The aesthetic interest is itself one interest among others, and certain objects satisfy it more fully than do others. In so far as the subjects had developed an aesthetic interest in painting, their likings of pictures would tend to be of an aesthetic sort, and hence their appraisals of the paintings as works of art would tend to coincide more with their P-ratings than in the case of persons whose attitude to the pictures was not primarily an aesthetic one. But even here no total coincidence is to be ex-

7. The difference is not quite significant, but similar results were also obtained by a different procedure. Students were asked to formulate the criterion they used in making the A-ratings. Those who said that they made the appraisals in terms of the effects of the pictures upon themselves alone had higher correlations of P- and A-ratings than those who did not use this criterion.

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pected, for the aesthetic judgment does not necessarily have as its point of reference the person making the judgment.

### 6. O-RATINGS

The second study was concerned with the views of students as to how they ought to live. One of the purposes of the study was to get light on the signification of the term 'ought' by attempting to find the conditions under which it is applied. A second purpose was to work at a more complex level of the self than had been done in other phases of the project, i.e., to allow the level of character—not merely the levels of physique and temperament—to enter more fully into the total perspective.

The main data to be considered are of three kinds: ratings of the Ways in terms of how a person thought he ought to live; ratings of the Ways in terms of how one ought to live if one is to live morally, or aesthetically, or religiously; ratings of individuals by themselves and by a close friend in order to describe in terms of the Ways how they did in fact live.

O-ratings ("ought" ratings) were first gathered from nineteen Harvard freshmen and sophomores.<sup>8</sup> They were asked to indicate by a number from 7 to 1 how much each of the Ways represented the way they thought they ought to live. In addition they also gave the customary P-ratings. The O-ratings were then scaled by the same psychometric method used for the P- and A-ratings. The corresponding intervals for the O and P scales are as follows: .55, .71; .52, .49; .46, .43; .60, .66; .38, .83. The intervals differ considerably toward the ends of the scales, and because the outer intervals have about as many O-ratings as the inner intervals, this difference is not compensated as it was in the case of the A and P scales for the paintings. Hence a correlation of O-ratings and P-ratings gives at best an estimate of the order of magnitude of their relation.

The average correlation of the O- and P-ratings for the nineteen subjects was .68.<sup>9</sup> That the O-ratings are not simply a second set of P-ratings is evidenced by the variation in scales al-

8. This was done by Harvey T. Lyon.

9. When the correlation is made by Ways rather than by individuals, the average is .57, a figure that approximately holds for many of the individual Ways. For Ways 8, 9, and 11, however, the correlations are very low, and for Ways 6 and 13 very high.

ready mentioned and also by the content of the Ways rated. Ways 1, 3, and 10 have considerably higher O-ratings than P-ratings, while the reverse is true for Ways 4, 8, and 9. The first set of Ways are high on Factor A, and the second set on Factor E (and to a less extent on Factor D). Thus the content of the term 'ought' for these persons was connected with the opposition between social restraint and self-control, on the one hand, and self-indulgence, on the other.

#### 7. MORAL, AESTHETIC, AND RELIGIOUS RATINGS

A further step in the analysis was made by having sixteen other United States subjects rate the Ways in terms of how one ought to live if one were to live (a) morally, (b) aesthetically, (c) religiously. In the ratings numerals from 7 to 1 were again used. After the ratings were made, the students were asked to write down the criteria of the moral, the aesthetic, and the religious which seemed to have been operative in their ratings.

The order in which the Ways were rated as moral in quality was as follows: Ways 3, 1, 7, 10, 6, 5, 8, 12, 2, 11 = 13, 9, 4. In the content analysis of the written material on the criterion of the moral, there were fourteen items stressing social participation in order to help others, three items stressing concern for one's self as well as for others, and no references to exclusive concern for one's self or to suprahuman agencies. The rank order indicates a considerable similarity to Factor A.<sup>10</sup> It also shows a conformity between the ratings and the stated criteria for a moral life. Hence in saying that to be moral one ought to live in the order indicated, the judges were revealing not merely the signification which the term 'moral' had to them but also the signification of the term 'ought': what ought to be done morally is what the social system and other persons require for their maintenance and development.

The religious order of the Ways was given as Ways 3, 7, 1, 9,

10. This does not hold for the place accorded to Way 7. It is of interest that Way 7 is given a high rank by these students in all of the three orders, moral, religious, and aesthetic; they also personally like the Way very much. These facts are perhaps interconnected: one tends to apply "good" terms, such as 'moral', 'religious', 'aesthetic', to what one personally likes. Way 7 has no such favored place with respect to the Allport-Vernon categories of Social, Religious, and Aesthetic (see Table 42).

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10, 11, 13, 2, 6, 12, 5, 8, 4. In the written material on the criteria of the religious there were five references to self-realization, five to suprahuman agencies, two to the happiness of others, and no references to personal success or enjoyment. Although the religious rank order of the Ways has some similarity to the moral order, it differs in the lower place assigned to activity (Factor B) and in the much higher place given to receptivity (Factor D). The reference point is more that of a man-cosmos system. What ought to be done from this religious point of view is what maintains and facilitates this man-cosmos transaction.

The category of the aesthetic has for these persons the self as the point of reference. The aesthetic rank order was given as Ways 4, 7, 9, 11, 2, 8, 3, 1 = 12, 5, 6, 10, 13. The order to some extent reverses the moral order. Factors B and A are low; Factors E and C are relatively high. In the written material on the criterion of the aesthetic, there were fourteen references to the self (to appreciation, to enjoyment, to self-awareness, and the like), three references to nature, and no references to a concern for other persons as such. The interest centers upon one's own consummatory experience, and what ought to be done aesthetically is what maintains and facilitates the self as an aesthetic object.

This material from the second group of subjects confirms the analysis of the first group, deepening and extending it. While it adds additional evidence that the term 'ought' has reference to action required by a system, it shows that the content of what ought to be done varies according to the system under consideration. Hence there are aesthetic and religious "oughts" as well as moral ones. It would seem that the most common signification of 'ought' is moral in character. The subjects in the first group were simply asked how they ought to live, and the rank order of the Ways arranged according to their means has a correlation of .90 with the rank order of the Ways according to morality given by the second group.

### 8. O-RATINGS AND INDIVIDUAL DIFFERENCES

The correlation of .68 between O- and P-ratings is an average. The range of individual correlations runs from  $-.04$  to  $.90$ , two-

thirds of them being .55 or more. It would be interesting to explore in detail the causes of this variation. For what kind of persons is the connection a strong one, and for what kind of persons a weak one? To answer this question one would need detailed knowledge of the individuals involved, and this information was not secured for most of the individuals who gave O-ratings. Eight persons, however, were more carefully studied.

In the course of securing data from these eight by interviews and by the *Thurstone Temperament Schedule*, each of them was asked to rate the Ways in terms of how closely they corresponded to his own actual mode of life. A close friend of each person also rated the person in the same manner. Such ratings were called descriptive ratings (D-ratings). For these eight persons the average correlation of the two descriptive ratings (by self and by friend) was .68, and the range was from .32 to .82.

In terms of D-ratings an estimate was made of the relative strength of each individual's moral, religious, and aesthetic motivations. One step in the procedure was to correlate the person's D-ratings with the average group ratings of the Ways according to moral, religious, and aesthetic categories. The correspondence with the interview material was in general close, but the interview material was used to make decisions where the correlations of the D-ratings to the moral, aesthetic, and religious ratings were not different enough to be trusted.

Rank-order correlations were made between the ranking of the Ways in terms of how a person thought he ought to live and the rankings given by the group to the Ways in terms of moral, religious, and aesthetic categories. In this way it was possible to determine whether the way a person thought he ought to live corresponded in moral, religious, and aesthetic qualities with the strength of his own motivations in these respects. The relations are found in Table 71.

It is evident that for these persons there is a close relation between the order of motivation and the order of acceptance of the corresponding kind of "ought." There are seventeen entries which match, although only eight would be expected by chance. In the case of the strongest motivation (indicated by the nu-

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meral 1) seven of the eight entries match. For five of the eight subjects the two orders are completely the same. Thus in the case of the first subject, highest in religious and lowest in aesthetic orientation, the order he gives to the Ways in terms of how he thinks he ought to live is, by the judgment of the group, highest in religious quality and lowest in aesthetic quality.

The only striking discrepancy is found in the case of the seventh subject. In the interview he stated that he wanted to

TABLE 71  
RELATION OF ORDER OF STRENGTH OF MOTIVATIONS TO THE  
ORDER OF ACCEPTANCE OF THREE KINDS OF OBLIGATION

SUBJECT	ORDER OF MOTIVATIONS			ORDER OF ACCEPTANCE OF OBLIGATIONS		
	Moral	Religious	Aesthetic	Moral	Religious	Aesthetic
1. ....	2	1	3	2	1	3
2. ....	1	2	3	1	2	3
3. ....	2	3	1	3	2	1
4. ....	3	2	1	2	3	1
5. ....	3	2	1	3	2	1
6. ....	1	3	2	1	3	2
7. ....	1	2	3	2	3	1
8. ....	1	2	3	1	2	3

help the underdog and that he had a moral and political drive to be active. In his D-ratings he put Way 6 first, and so did his friend. But he did not really like this way to live: originally he rated it 2 and in a retest three months later had only increased the rating to 5. His temperament score was high for activity, high average for sociability and reflectivity, and very low in vigor and impulsiveness. He thought the detachment involved in Way 2 to be weak in his character, but his friend put Way 2 second highest in his description of the subject. Physically, the subject is high in ectomorphy, below average in mesomorphy, and very low in endomorphy. His case seems to be one of conflict between character and temperament; action follows the moral life but with protests from the inner man, who thinks he



ought to live more aesthetically. Even here it may be noted that the manner in which this person interpreted the aesthetic life is considerably different from the group interpretation. Thus he gives Way 3 a much higher aesthetic rank than does the group as a whole. The way he would like to live appears less aesthetic in quality to the group than it does to him; therefore his protest against his dominant character organization is not quite as strong as it first appears to be.

There is more discrepancy between D- and P-ratings than between O- and P-ratings.<sup>11</sup> One frequent claim of the students is that they are much more detached and reflective than they would like to be. A less frequent claim is that they are too passive. There is considerable discontent with their momentary selves. Their "is" is certainly not identical with their "ought." Yet, as the preceding discussion shows, the way they think they ought to live is on the whole such as to meet the requirements of the character structure which they do in fact have. This seems to confirm in another way the view that the essential reference of 'ought' is action directed to the maintenance and development of a system.

If this is so, if 'ought' signifies "system required action," then the "ought" cannot in general be separated from the "is," for what ought to be done depends on the requirements of some existing system. Human conceptions of the desirable exist as elements in a personality system and thus are among the system requirements that control judgments of what ought to be done. Specific conceptions of the desirable may, however, be challenged in terms of their effect upon the system of which they are elements, or upon other systems. If it be asked whether a given system ought to be permitted to exist, then, on this explication of 'ought', the question is indeterminate until some other reference system is specified.

On this interpretation, 'ought' as a prescriptive value term has a semantic aspect. But it more than merely signifies an act as required; it tends to dispose its interpreter to the act in question. 'Ought' tends to select among actions as 'good' tends to

11. For eighteen persons the average difference per rating was 1.32 in the first comparison and 1.12 in the second.

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select among the objects to which action is directed. Both terms operate in the control of preferential behavior. An investigation of the pragmatics of value terms lies, however, beyond the limits of this study.

### 9. PHILOSOPHIC BELIEFS

The third topic of this chapter is related to the subject matter of chapter i, section 5, which suggested that the Ways are fragments of "world views," "value-orientations," "philosophies of life," in the sense that a person who favors a given Way tends to justify his preference in terms of certain conceptions of man, the cosmos, and man's place in the cosmos. Since the Ways to some extent contain explicit reference to such conceptions, it is to be expected that some of them will fall more easily into certain philosophical frameworks than into others. The degree to which this is true will vary with the Way, since some of them more than others seem to be compatible with a number of alternative philosophies. Of particular interest here is the question whether the value dimensions that have been isolated are embedded in characteristic philosophies of historically recognizable type. In the present study no attempt was made to investigate this question with the care which it deserves, but some available material indicates that a positive answer can be given.

The data to be analyzed were obtained from a simple document, "Philosophic Beliefs."<sup>12</sup> No merit is claimed for this obviously superficial instrument; its sole use lay in detecting any trends that merited further study. The ten sets of questions sample some philosophic doctrines and some attitudes found in "philosophies of life."

12. Some items from this questionnaire were discussed in *The Open Self*, chap. vi, but that discussion centered around the relation of philosophic beliefs to constitutional variations rather than around the value dimensions. The types of philosophy isolated on these separate approaches have much in common, and this is of interest. Nevertheless, the present approach is preferable, since the relation of philosophic beliefs to the Ways is stronger and clearer than their relation to physique. Hence the approach to a differentiation of types of philosophy in terms of the value dimensions holds more promise. For the underlying conception of philosophy see also *Signs, Language, and Behavior*, pp. 175-78, 233-38.

PHILOSOPHIC BELIEFS

Under each of the following sets of beliefs (A, B, etc.) indicate your order of belief in this way: put the number 1 before the alternative that you agree with *most closely*, the number 2 before the alternative *next nearest* to your belief, and the number 3 before the alternative you *disagree with most*.

- A. .... the course of history is capricious  
..... the course of history is purposive  
..... the course of history is mechanistic
- B. .... the universe is a society of selves  
..... the universe is a set of material objects or energies  
..... the universe is an intellectual system or structure
- C. .... the world is due to God's love  
..... the world is due to God's will  
..... the world is due to God's mind
- D. .... the course of history justifies optimism with respect to society's future  
..... the course of history justifies the belief that man can improve his society by strenuous effort  
..... the course of history justifies pessimism with respect to society's future
- E. .... theories are true if they are verified by observation  
..... theories are true if they work in practice  
..... theories are true if they are logically consistent
- F. .... man should rely on powers outside of himself for relief from evil  
..... man should rely on control of the world for relief from evil  
..... man should rely on control of himself for relief from evil
- G. .... the goal of life is feeling  
..... the goal of life is achievement  
..... the goal of life is wisdom
- H. .... the first third of life is the best  
..... the second third of life is the best  
..... the last third of life is the best
- I. .... affection is the most important thing to cultivate  
..... action is the most important thing to cultivate  
..... knowledge is the most important thing to cultivate
- J. .... the moral person should follow the established moral laws  
..... the moral person should judge acts as right or wrong in terms of their consequences  
..... the moral person should follow his conscience

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The replies of 110 college men and women who had also rated the Ways were analyzed. Each Way was first considered separately in terms of those who rated the Way a 7 or a 6, i.e., those who liked it "very much" or "quite a lot." The number of first choices was tabulated for each of the three items under each of the ten sets of beliefs. The Ways (omitting Way 7) were then grouped according to the five factors, and the percentage of first choices given to each item in each of the ten categories was computed. The number of cases under each factor indicates the number of 7's and 6's given to the Ways defining the factor, and the results and groupings are shown in Table 72.

It is obvious at once that the variations by factors for a given item are not, in general, large and that the rank order of percentages of the items in a given philosophic category is often the same for different factors. Consequently, the linkage between liking Ways strong in certain factors and the acceptance of the thirty items in the questionnaire is not, generally speaking, very strong. Nevertheless there are some groupings of items, and their internal consistency is evidence that the groupings are not artifacts.

The most strongly accepted beliefs for the group as a whole are: that history is purposive; that history justifies the belief that man can improve his society by strenuous effort; that theories are true if they work in practice; that man should rely on control of himself for relief from evil; that the second third of life is best; and that knowledge is more important to cultivate than action or affection. There is considerable difference of opinion as to whether the moral person ought to judge acts right or wrong in terms of their consequences or whether he ought to follow his conscience. And there is almost equal distribution of opinion as to whether the goal of life is feeling, achievement, or wisdom, and whether the universe is a society of selves, a set of material objects or energies, or an intellectual system or structure.

The directions of the variations stand out when the items are compared in terms of the value factors. Table 72 is the basis for the following analysis on those terms, and though most attention is paid to the factor groups in which an item is given the

TABLE 72

PERCENTAGES OF FIRST CHOICES AMONG PHILOSOPHICAL BELIEFS  
ARRANGED ACCORDING TO VALUE DIMENSIONS

BELIEF	FACTOR					MEAN
	A (Ways 1, 10) (N=97)	B (Ways 5, 6, 12) (N=82)	C (Ways 2, 11) (N=21)	D (Ways 3, 9, 13) (N=48)	E (Ways 4, 8) (N=61)	
A { a. ....	21.7	23.2	19.0	25.0	34.4	24.7
b. ....	52.6	46.3	47.7	50.0	41.0	47.5
c. ....	25.7	30.5	33.3	25.0	24.6	27.8
B { a. ....	21.7	23.2	23.8	39.6	26.2	26.9
b. ....	40.2	47.6	52.4	20.8	37.7	39.7
c. ....	38.2	29.2	23.8	39.6	36.1	33.4
C { a. ....	15.5	21.3	21.1	36.2	12.1	21.2
b. ....	34.5	50.6	42.2	29.8	55.2	42.5
c. ....	50.0	28.0	36.8	34.0	32.7	36.3
D { a. ....	13.3	9.8	14.3	20.8	12.9	14.2
b. ....	73.4	78.0	66.6	64.6	72.5	71.0
c. ....	13.3	12.2	19.0	14.6	14.5	14.7
E { a. ....	27.6	21.9	35.0	16.7	19.4	24.1
b. ....	55.1	52.5	35.0	58.3	62.8	52.7
c. ....	17.3	25.6	30.0	25.0	17.8	23.1
F { a. ....	11.2	7.2	9.5	18.8	8.0	10.9
b. ....	16.3	16.9	33.3	12.5	12.9	18.4
c. ....	72.5	75.9	57.2	68.7	79.1	70.7
G { a. ....	23.8	19.5	25.0	38.3	33.3	28.0
b. ....	36.1	54.8	15.0	23.4	38.4	33.5
c. ....	40.1	25.6	60.0	38.4	28.3	38.5
H { a. ....	9.6	15.0	9.5	25.6	17.0	15.3
b. ....	74.5	76.2	66.6	67.4	76.2	72.2
c. ....	15.9	8.8	23.8	7.0	6.8	12.5
I { a. ....	19.8	14.8	21.1	39.6	17.7	22.6
b. ....	10.4	25.9	0.0	6.2	12.9	11.1
c. ....	69.8	59.2	78.9	54.2	69.3	66.3
J { a. ....	14.6	15.9	10.0	12.5	22.6	15.1
b. ....	41.7	46.4	50.0	52.1	43.6	46.8
c. ....	43.7	37.8	40.0	35.4	33.8	38.1

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highest and the lowest percentage of first choices, some attention is paid to the second highest percentages.

Factor A (as represented by Ways 1 and 10) is highest among the factors on the beliefs that the course of history is purposive, that the world is caused by God's mind, that the moral person ought to follow his conscience. It is second highest in the views that the world is an intellectual system, that man ought to rely on powers outside of himself for relief from evil, and that wisdom and knowledge ought to be prized. It is lowest among the factors on the beliefs that the universe is a society of selves, that logical consistency is the test of truth, and that acts ought to be judged morally in terms of their consequences. This seems a belief system appropriate to Ways that stress the value of social restraint and self-control and that are oriented toward the social or cosmic system rather than toward the individual person. Philosophically it has affinities with various forms of absolute idealism.

Factor B (represented by Ways 5, 6, and 12), by contrast, shows the largest stress upon strenuous effort to improve society, upon achievement as the goal of life, and upon action as the most important thing to cultivate. It is lowest among the factors on the items that justify pessimism, look to help from powers outside man, and stress feeling, affection, or wisdom. The total complex suggests some form of philosophic voluntarism, with the stress more upon human action than upon the nature of the cosmos.

Factor C is represented by Ways 2 and 11, but in this case essentially by Way 2, since only one person favored Way 11. This factor is higher than the others in the acceptance of the views that the course of history is mechanistic, that the world is a set of material objects or energies, that man ought to rely on the control of the world for relief from evil, and that theories are true if they are verified by observation or are logically consistent. It also favors knowledge, wisdom, the later period of life, and is most inclined to pessimism. It is lowest on the views that history is capricious; that achievement is the goal of life; that action is the main thing to be cultivated; that man should

rely on control of himself for relief from evil;<sup>13</sup> that following the established moral laws is the best principle for the moral person; and that youth is the best time of life. Philosophically this suggests some variety of realism; it could be either materialistic or dualistic.

Factor D is represented by Ways 3, 9, and 13. Here the outlook is again markedly different. It is highest among the factors on these beliefs: that the universe is a society of selves; that it is an intellectual system or structure; that optimism with respect to society's future is justified; that the goal of life is feeling; that affection is the most important thing to cultivate; that man ought to rely on powers outside himself for relief from evil; that the first third of life is the best; and that the moral person ought to judge acts as right or wrong in terms of their consequences. In contrast, the lowest comparative percentages are found on the items which stress observation as a test of truth; reliance on control of the world as relief from evil; the universe as a set of material objects or energies; the world as due to God's will; the improvement of society by strenuous effort; and knowledge as the most important thing to be cultivated. The philosophy here indicated is some form of personal idealism.

On Factor E (represented by Ways 4 and 8) the belief that history is capricious is highest. Also highest are the views that the world is due to God's will, that working in practice is the test of the truth of theories, that man ought to rely upon control of himself for relief from evil (again the result of the interpretation of "control of himself"), and that the moral person ought to follow the established moral laws.<sup>14</sup> It is second highest on the belief that the world is a society of selves. The lowest places for any factor are accorded to the views that history is purposive or mechanistic, that the last third of life is the best, and that

13. Though one would expect a person who liked Way 2 to favor "control of himself" rather than "control of the world" for relief from evil, it seems that "control of himself" in philosophic belief F was not interpreted by the students as "self-control" (in the sense of Way 2) but as "looking out for one's self." Evidence of this is found in the fact that the third item in F is highest for people who favor Ways 4 and 8 (Factor E) and next highest on the Factor B group of Ways.

14. This last item is highest only because of Way 8; it is not so for Way 4. Way 8 was favored by twice as many persons as was Way 4.

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the moral person ought to follow his conscience. The resulting picture is not as sharp as the others. The stress upon practicality, though clear, is not the whole content. The emphasis on history as capricious and upon the world as caused by God's will suggests a cosmology different from the views associated with the other factors. For want of a better term, the position may be identified philosophically as some variety of vitalism.<sup>15</sup>

An affinity or compatibility between the five value dimensions and five commonly recognized types of philosophic world view is thus indicated. And since the value dimensions were found to be somewhat related to temperamental and constitutional differences, the world views are also to some extent related to such individual differences. This may help to explain why all the main world views tend to appear in the great cultures and why they frequently coexist in a culture. This relation to individual differences is, however, only part of the story, for just as in the rating of the Ways the cultural value pattern tended to override variations in persons, so it does in the case of philosophies. Philosophies as part of the cultural system of a society perform various functions within the society. Among other functions they tend to support a certain set of basic values as against other sets. Some philosophies tend, therefore, to be favored more than others in a given society at a given stage of its development. And as such they become determinants of the values of individuals rather than mere expressions of individual differences. Here, as in the case of the rating of the Ways, the relation is reciprocal: operative values tend to influence the selection among conceived values, but socially approved conceived values tend to influence operative values. Men both make their philosophies and are made by them.

At the conclusion of this brief report, attention may be called to Dr. Elsa A. Whalley's more extensive study of philosophic

15. The advocates of Way 7 favor more than do any of the factor groups the views that the course of history is capricious and that man can improve his society by strenuous effort. They are lower than any of the factor groups in the beliefs that the world is either purposive or mechanistic; that the universe is a society of selves; that the world is caused by God's mind; that either optimism or pessimism is justified with respect to the future; that the goal of life is feeling; and that man should rely on powers outside himself for relief from evil. Of the 110 persons, 69 gave Way 7 a rating of 7 or 6.



beliefs.<sup>16</sup> Using 107 student subjects and 62 items representative of various philosophic points of view, she obtained by item analysis five clusters of beliefs, which she classified as Supernaturalism, Anti-Supernaturalism, Voluntarism, Conservatism, and Social Realism. Since the Ways were used as part of the material analyzed, it is possible to compare the clusters thus obtained with the groupings of philosophic beliefs around the value dimensions reported in the present study.

Such comparison reveals marked similarities between the clusters Supernaturalism, Voluntarism, and Conservatism and the groupings of philosophic beliefs in terms of Factors D, B, and A respectively. Social Realism has some similarity to the grouping of philosophic beliefs in terms of Factor E. Because Dr. Whalley did not use the ratings of Way 2 in her final analysis, it is not possible to say whether the cluster Anti-Supernaturalism matches the grouping here found in terms of Factor C, though it is evident that there is considerable similarity of content.

The Whalley analysis being controlled in terms of statistical significance and the present study not, the similarity of results increases confidence in the view here taken that the value dimensions are reflected in differences of philosophic outlook.

16. "Individual Life-Philosophies in Relation to Personality and to Systematic Philosophy" (Ph.D. dissertation in psychology, University of Chicago, 1955).

## *Summary and Interpretation*

### 1. THE MAIN RESULTS

The task of this final chapter is to bring into focus the main results that have been achieved in such a way as to suggest how they may be interpreted in terms of the total process of human behavior. Attention will also be given to the relation of the present study to the earlier works, *Paths of Life* and *The Open Self*.

Three major results have emerged: the attainment of a cross-cultural interval scale for measuring values; the isolation of five value dimensions that appear (with minor variations) in the three main cultural samples; and the accumulation of a body of evidence supporting in its totality a field conception of values.

The psychometric method by which the measuring scale was determined is in standard use; hence the attainment of the scale and scale values was simply a demonstration that psychological scaling methods are applicable to the ratings of such value content as is embodied in the "Ways To Live" document. It was shown that similar scales appeared in the rating of the Ways in five cultural samples so that a common scale could be constructed validating cross-cultural comparisons. Whether similar results would be obtained in the ratings of other kinds of material (some evidence of a similar scale appeared in the ratings of paintings), and in still other cultures, can only be determined by additional studies.

The determination of scale values for the Ways on this common scale does not mean that even the values embodied in the Ways are being measured in all senses of the term. Since the scale is not a ratio scale, ratio comparisons can only be made on

the basis of an assumed zero point; although arguments can be given for assuming that the center of the fourth (middle) response category (indifference) is the zero point, the present study does not objectively show that this assumption is justified. Further, the scale values of the Ways measure, not the object value of the Ways as such, but differences in the liking of these contents. It does not necessarily follow that one conception of the good life is better than another, in the sense of having greater object value, simply because it is better liked, i.e., is given a higher place among conceived values. The problem of the measurement of object values and the relation of such values to preferences among conceived values has not been here explicitly investigated. Nevertheless, to have obtained a cross-cultural interval scale for measuring preferences among conceived values was a step of considerable importance for such an investigation.

The isolation of five value dimensions by factor analysis shows that the rating of the Ways is being done in terms of more than one common characteristic; values, in so far as here studied, do not lie along a single dimension but are multidimensional. Because the five dimensions isolated appear in the analysis of India as well as United States data and, with slight and explicable variations, in the China data, they are obviously of considerable importance. This does not mean that there are only five dimensions in the entire field of value, nor even that these five might not themselves be broken down under certain conditions into more primary dimensions (as did indeed happen with one of them in the case of the China analysis). The similarity of results obtained in a number of analyses does, however, indicate that factors of considerable stability have been reached. Put in terms of a spatial metaphor, it is as if persons in diverse cultures employ five common co-ordinates in locating the place of conceptions of the good life in value space. Or using a musical example, it is as if persons in various cultures have in common five major tones in the musical scales on which they compose different melodies. The value dimensions here isolated can, in any case, serve as points of orientation and comparison for further studies of the dimensionality of the value domain.

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The value patterns of the cultures sampled showed both similarities and variations. Some attempt was made to assess the magnitude of these differences, but interest was mainly directed to exploring various possible determinants of the variations in ratings across and within cultures. Evidence was given that the ratings of the Ways (and hence the value factor scores) varied with differences in sex, somatotype, temperament, character, intracultural traditions, economic status, and size of community in which the subjects were raised. The methods employed did not permit a precise determination of the relative contributions which the various determinants made to the ratings. It was evident, however, that the differences between the cultures studied tend to be larger than the variations in the above determinants within a culture. As to the intracultural determinants, psychological and constitutional differences seem to play the greatest part in the ratings of the Ways, with population variations and economic status next in importance, and with sex and body-size differences playing the smallest part.<sup>1</sup>

The important point emerging from the study, that no one of the intracultural determinants accounts in any decisive manner for the ratings of the Ways, demonstrates that values, in so far as they are reflected in such ratings, occur in a field and are responsive to many kinds of variation in the field. Hence the scientific study of values ultimately can be carried on only as an interdisciplinary enterprise. The study of value transcends the boundaries of the traditional scientific disciplines, and in doing so it contributes to the integration of science.

### 2. AXIOLOGY AND PREFERENTIAL BEHAVIOR

A definition of the term 'value' has not been presupposed in this investigation. Instead, three common usages of the term

1. The last two sentences of this paragraph give the impression obtained from the entire study. The order of magnitudes there stated is, however, supported by the D's introduced throughout the presentation, even when the biases introduced by differences in sample sizes are taken into account. This is true of the Chinese and Indian D's as well as those of the United States. The only variation is in the India sample where sex differences seem to be of the same order of magnitude as differences between the four population groups. D's for body size and psychological traits were not obtained for the China and India samples.

were (in chap. i) distinguished by the phrases 'operative value', 'conceived value', and 'object value'. The belief was expressed that a study of preferential behavior would throw light upon these aspects of the value domain and upon their interrelations, thus furnishing a test of the fruitfulness of conceiving axiology as the science of preferential behavior. It seems that the present study gives some confirmation of this belief.

It is true that only a small segment of preferential behavior has here been under review. The primary data have been preferences for various possible conceptions of the good life.<sup>2</sup> Certain conceived values have thus been the focus of attention, but, as the development showed, when one begins to seek for the determinants of preferences for conceived values, operative values are drawn into the circle of investigation. Such psychological instruments as those of Thurstone, Cattell, and Allport and Vernon indicate what modes of behavior and what objects are preferred by various kinds of persons. Because they reveal preferences over time rather than mere momentary choices, they are indices of operative values. Hence it becomes possible via the study of preferential behavior to investigate the relation between operative and conceived values, both in the normal individual and in the disturbed personalities of the neurotic and psychotic. Something of this was in fact done, but only in a preliminary manner.<sup>3</sup>

It is likewise true that an extended investigation of the de-

2. In case the term 'preference', here and elsewhere, causes trouble for the reader, a word of comment may be introduced. 'Preference' is often employed in a way which involves a deliberate comparison of two or more objects. In the original plan of this study it was intended to have subjects indicate preferences between pairs of Ways, paintings, and other objects. But since statistical studies have shown that substantially the same results are obtained when ratings are used instead of comparisons of pairs of objects, this plan was not followed. I see no reason, however, to discontinue the use of the term 'preference' when ratings are employed, especially since common usage of the term is not limited to explicit comparisons.

3. If Horney's theory of neuroses is correct, it would seem that the neurotic individual seeks to maintain a conception of himself which contradicts his operative values. Perhaps by contrast the psychotic individual has repudiated the type of conceived values represented by Factor A, so that his operative values are no longer under the control of conceived values necessary for successful interpersonal relations and for the maintenance of the social system. If this is so, the relation of conceived values and operative values is quite different in the neuroses and psychoses.

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terminants controlling preferential behavior also makes contact with the domain of object values, even if it does not provide, as such, a measure of those values. Objects differ in their capacity to sustain preferential behavior. It would be very difficult for a person to prefer to live in a room of 120° if he could lower the temperature at will to 72°—though with varying conceived values some individuals would resist longer than others the temptation to lower the temperature. Something similar to this is evident in conceptions of the good life: some of the Ways are more difficult to follow for some persons than for others, and some of the Ways are more necessary for the operation of a social system than others. Relative to individual operative values, the Ways differ in object value; relative to the requirements of social systems, the Ways differ in object value, and these two need not coincide.

The ratings of the Ways in the various cultures show that this problem is met in an ingenious manner. Certain widely favored Ways (such as 1, 3, and 6) are Ways necessary for the continuation of the social system, and at the same time (with some qualification in the case of Way 6) they are so little linked to temperamental and constitutional differences that they are available to most individuals of the culture. Certain other Ways (such as Ways 2 and 12), which are not of the same importance in the maintenance of the social system, do not find wide acceptance and tend to be favored by individuals with the temperamental and constitutional traits for which these Ways are appropriate. The ratings suggest that by and large the conceived values of individuals take account of both the individual's own personal characteristics and the requirements of organized society. In general, conceived values are a function of both operative values and object values and more or less (though not in every individual case) serve to maintain both the personality and society.

### 3. RELATION TO EARLIER STUDIES

In the Preface note was taken of a number of considerations which motivated the present study, including the one of check-

## Summary and Interpretation

ing the basic ideas and assumptions of *Paths of Life* and their elaboration in *The Open Self*. These two studies were humanistic in their purpose and style rather than scientific, but it was implicitly assumed in them that the factual basis with respect to which the analyses and evaluations were made was tenable. The present study seems generally to support that assumption, but it forces distinctions not made, or not sufficiently utilized, in the earlier works.

It has already been suggested that a shift in basic categories occurred in moving from *Paths of Life* to *The Open Self*, that "dionysian" in the first study is the reverse of "detachment"

TABLE 73  
MEAN RATINGS OF SEVEN WAYS IN TERMS OF  
THE CATEGORIES (29 JUDGES)

Way	I	II	III
1.....	3.38	3.66	5.69
2.....	2.76	2.28	6.28
3.....	6.17	1.69	3.38
4.....	5.93	2.76	3.93
5.....	3.38	5.93	1.34
6.....	1.66	6.83	2.14
7.....	4.93	4.31	4.55

in the second, "promethean" the reverse of "dependence," and "buddhistic" the reverse of "dominance."<sup>4</sup> That this is so can be shown by comparing the profiles of the first seven Ways in terms of Categories I, II, and III (taken as indicating the contents of "dependence," "dominance," and "detachment") with the profiles of the seven alternatives considered in *Paths of Life*.

Table 73 (derived from Table 3) gives the mean ratings of the first seven Ways, as judged by twenty-nine persons in terms of the Categories. If "dionysian" is Category III in reverse,

4. By 'reverse' is here meant the following: a rating of 7 in dionysian would be a rating of 1 in detachment, a rating of 6 in dionysian would be a rating of 2 in detachment, and so on. Since these pairs of numbers always total 8, to translate, say, a mean in one category to the mean of the reverse category, it is only necessary to subtract the mean in the first category from 8. Thus a mean of 5.69 in detachment becomes a mean of 2.31 in dionysian. This conversion procedure is used to obtain Table 74 from Table 73.

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"promethean" Category I in reverse, and "buddhistic" Category II in reverse, conversion of Table 73 produces Table 74. If the profiles alone are considered, Table 74 leads to Figure 5.

With the exception of Way 4, these profiles match the profiles given in *Paths of Life* (here reproduced in chap. i, sec. 1): Way 1 and "Apollonian," Way 2 and "Buddhist," Way 3 and "Christian," Way 5 and "Mohammedan," Way 6 and "Promethean," Way 7 and "Maitreyan." This shows that the categories of

TABLE 74  
MEAN RATING OF SEVEN WAYS IN TERMS OF  
"DIONYSIAN," "PROMETHEAN,"  
AND "BUDDHISTIC"

Way	dionysian	promethean	buddhistic
1.....	2.31	4.62	4.34
2.....	1.72	5.24	5.72
3.....	4.62	1.83	6.31
4.....	4.07	2.07	5.24
5.....	6.66	4.62	2.07
6.....	5.86	6.34	1.17
7.....	3.45	3.07	3.69



FIG. 5.—Profiles of first seven Ways

*Paths of Life* can be translated into the categories of dependence, dominance, and detachment as used in *The Open Self* and in the present study. It also shows that the first seven Ways of the "Ways To Live" schedule match fairly well the seven alternatives considered in *Paths of Life*. The only exception is Way 4; the transformation of the judges' mean ratings makes Way 4 slightly more "buddhistic" than "dionysian," while in *Paths of Life* the relation was reversed. Hence Way 4 cannot be regarded as an entirely suitable expression of the Dionysian attitude as given in the earlier book.<sup>5</sup>

5. The judges differed considerably in the analysis of Way 4, the standard deviations on II and III (and hence on "buddhistic" and "dionysian") being very high.



## Summary and Interpretation

Since in the present study the differences in the Ways expressed in terms of Categories I, II, and III have been found to be significantly related to the value dimensions, and these in turn to differences in personality, the underlying factual assumption made in *Paths of Life* as to the relation of value and personality has been confirmed.<sup>6</sup>

The present study has considered a larger range of alternatives than did *Paths of Life* and has employed more precise methods. The main theoretical development, however, lies in the more explicit recognition of the place of social determinants in the acceptance or rejection of the Ways. It is now seen that some of the value dimensions as revealed by factor analysis have a fairly close relation to constitutional and temperamental traits (Factors B and C), while others have little or no relation to such traits (Factor A). Thus the social system as well as the personality system must be kept in the forefront of attention in the study of values. This means, as previously noted, that dependence, dominance, and detachment take on different forms with respect to the two types of system reference. The factor analyses clarified this point by separating Ways high in Category I into Factors D and E and Ways high in Category III into Factors A and C. The China analysis suggested a similar separation for Category II.

Thus both Factors D and E involve dependence in the very general sense of receptivity, responsiveness to stimuli, acceptance. But in Factor E it is the immediate situation and the immediate given impulses which are accepted, while in Factor D receptivity is directed toward nature, toward the man-cosmos relation, or to the needs of other persons. Analogously, detachment in the general sense involves restraint, deliberation, self-control. But in the form of Factor C this restraint of the self is

6. It does not seem necessary to relate in detail the results of the present study to the remarks made about paintings, philosophic beliefs, psychoses, and somatotypes in *The Open Self*. Those remarks were of a preliminary nature, and occasional differences in factual detail are to be resolved in favor of the present study. The same is to be said of the paper "Individual Differences and Cultural Patterns," in *Personality in Nature, Society, and Culture*, ed. Clyde Kluckhohn and Henry A. Murray. The order of the relation of the six Ways there considered to mesomorphy was also found in the larger group of 253 persons used in the present investigation.

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directed to the purposes of the self, while in the form of Factor A it is enlisted in the service of social causes. Finally, dominance in general involves action in the world, the initiation of changes in events, outwardness of orientation. But it makes a great deal of difference whether action is for the sake of the actor or whether it is directed to the achievement of social goals.

### 4. VALUES AND BEHAVIOR

Another motivating purpose of this study was to develop the theory of value in such a way that it would find a place within, and make a contribution to, the general theory of behavior. It is worthwhile from this point of view to consider the relation of the value categories and dimensions of the present study to the theory of action of George H. Mead and to the theory of action of Talcott Parsons and his associates.

According to Mead's general analysis of an act,<sup>7</sup> the organism with an impulse (a tendency to act in a certain way) is sensitized to stimuli that serve as clues for the location of objects relevant to the satisfaction of the impulse, and under the guidance of these clues it moves toward the object. It then acts upon the object to make it available to the impulse. And finally, in proper relation to the object, the impulse attains satisfaction. Mead called these three phases of the act the perceptual phase, the manipulatory phase, and the consummatory phase.

The perceptual phase of action clearly involves detachment. Impulses are not simply indulged; behavior is wary, restrained, not yet totally committed. The search for, and guidance by, clues (signs) gives this phase of behavior a strongly cognitive character.

In the manipulatory phase of action, in contrast, the actor is committed to an object, acts upon it, initiates changes in it. Here dominance is in the forefront, in the attempt to manipulate the object so that it will reveal the properties needed by the controlling impulse.

In the consummatory phase of the act, the situation is again different. The organism must now let the object act upon it if the impulse is to be fulfilled. Receptivity to the object is called

7. *The Philosophy of the Act*, Parts I-II, IV.

for. At this stage of the act dependency is the characteristic emphasis.

On this analysis the value categories of detachment, dominance, and dependence correspond to phases of action, and they are three in number because action has three main phases.

The theory of action developed by Talcott Parsons and his collaborators suggests why at the level of human social action the differentiation of the five value dimensions appears.<sup>8</sup> This theory of action gives the category of value a central place. Like Mead's theory it is built on the base of purposive behavior, but it stresses more the details of the way in which such behavior is essentially selective. On this approach the actor in any situation is confronted with a series of choices as to what attitudes he will take toward objects in the situation, what aspects of objects he will attend to, and whether his orientation will be to himself or to the social system. The standards according to which these choices are made are called "value-orientations." They are characterized in terms of five "pattern variables," each of which presents a dichotomous choice.

Thus in a given situation the actor's orientation may be toward himself as a person or toward the social system of which he is a member. This is called the "self-orientation versus collectivity-orientation" pattern variable. With respect to his own attitude, the actor may simply indulge his impulses or he may for the moment restrain them. This is the "affectivity versus affective neutrality" pattern variable. The actor may be receptive only to specific properties of objects or generally receptive to them—the "specificity versus diffuseness" pattern variable. With respect to the objects themselves, the actor may attend to them in terms of some universal frame of reference or in terms of their particular relation to himself—the "universalism versus particularism" pattern variable. Finally, and still with respect to objects, the actor may attend to their qualities or to their activities. This is the "ascription versus achievement" pattern variable (later called the "quality versus performance" pattern variable). Since any given act, on this analysis, is char-

8. *Toward a General Theory of Action; The Social System; Working Papers in the Theory of Action.*

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acterized by the pattern of such choices, the five dichotomies are called pattern variables.<sup>9</sup>

At first sight it might seem that the five Parsonian pattern variables (in terms of which value-orientations are characterized) are simply the five value dimensions of the present study. Thus "self-orientation versus collectivity-orientation" might be matched with some plausibility with Factor C, and "affectivity versus affective neutrality" matched (with less plausibility) with Factor E. But it will be found that other matchings cannot be carried through in a convincing manner.

A more plausible connection of the value dimensions of this study with the theory of action under consideration can be made in terms of the analysis of the phases of action developed in the *Working Papers in the Theory of Action*.<sup>10</sup> There, four phases of action are isolated, each characterized in terms of a combination of four of the alternatives embodied in the pattern variables. These phases are called Adaptation, Goal Gratification, Integration, and Latency. Thus Adaptation (to the situation) requires that objects be viewed universalistically but in specific relation to the goal and requires that the actor take the attitude of affective neutrality to objects and be interested in their performance (the effects they will produce when acted upon). This phase of action clearly corresponds to Mead's manipulatory phase of the act (though it presumably also includes his perceptual phase) and to Factor B among the value dimensions.

In the Goal Gratification phase, Affective Neutrality gives way to Affectivity, and Universalism to Particularism, since "the object is a goal object, to be possessed, consumed, enjoyed, or appreciated."<sup>11</sup> This phase is the analogue of Mead's consummatory phase and corresponds to Factor E of the value dimensions.

The other two phases of the act have no analogues in Mead's

9. The account of the pattern variables makes no pretension of exactness. For an adequate exposition the reader must consult some such formulation as that found in *Toward a General Theory of Action*, pp. 76 ff.

10. Chap. v, especially pp. 179-90.

11. *Working Papers in the Theory of Action*, p. 184.

analysis of the individual act. The reason is that the Parsonian analysis views the act in its relation to a system, and it is in this connection that Integration and Latency enter into the account of the phases of action.

The phase of Integration in this analysis seems to be essentially concerned with the reinforcement of the stability of the social system within which a particular act has taken place. It involves an affective but diffuse attitude to system-membership as such. The nearest analogue among the value dimensions is Factor D.

The phase of Latency is the maintenance of the capacity of the system to operate when no overt action is under way or when some one phase of action is for the moment dominant over the other phases which are necessary for the completion of the act. The pattern variables involved are Quality, Affective Neutrality, Universalism, and Diffuseness. The analogue among the value dimensions is Factor A.<sup>12</sup>

This leaves only Factor C unaccounted for. Because Factor C can be regarded as one form of orientation to self rather than to the social system, the analogue to Factor C is not a phase of action but the pattern variable "self-orientation versus collectivity-orientation." Detachment within the system of social action appears in the form of Factor A.<sup>13</sup>

Parsons, following a suggestion of Bales, now believes that a sixth pattern variable is needed to pair with "self-orientation versus collectivity-orientation."<sup>14</sup> This variable "involves a ref-

12. Professor Parsons remarked in conversation that the phase of Latency contains the common content of the personality and the social system. In the personality system it is a component of character, since it involves the internalization of the social value pattern. Hence this content must be something that can be acquired by all members of the social system. As we have seen, Factor A is not related to specific constitutional or temperamental traits.

13. Professors Parsons and Bales have agreed that out of four possible ways of relating the five value dimensions to the five pattern variables, the correspondences given in the text are the most plausible. It is possible to investigate the relations in question by objective methods. Professor Bales has constructed a value schedule based on the Parsons-Shils-Bales theory of action. Factor analysis of the data gained from this instrument is now under way, and will show whether the underlying dimensions are the same as those found in the present study and, if not, where the differences lie.

14. "Some Comments on the State of the General Theory of Action," *American Sociological Review*, XVIII (1953), 618-31.

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erence in time which goes beyond the specific current system-problems of the system itself. The essential problem seems to be that of *continuity* in time as a focus of valuation; hence the dilemma may be formulated as simply that between short-run and long-run interests or values." If this is so, it seems that Chinese Factor  $B_1''$  might correspond then to "collectivity-orientation versus self-orientation" and Factor C to the proposed sixth pattern variable: Ways 2, 9, and 11, which give the positive pole of this factor, have no concern with the continuity of the social system; while Ways 1 and 5, which indicate the negative pole of this factor in the China and United States analyses, respectively, do show concern for the continuance of the social system. Factors  $B_2''$ , E, D, and A would then correspond to the four phases of human action, or, as stated by Parsons, to "the four basic functional problems of systems of action." This would link the six value dimensions (suggested by the combination of the China and United States analyses) to the proposed six pattern variables.

In this connection, attention may be called to Quincy Wright's six-dimensional field theory of values,<sup>15</sup> five of the dimensions being derived from five Parsonian pattern variables, while the sixth, affirmation versus negation, is derived from the ideas of Albert Schweitzer. Wright, however, interprets his six values as bipolar dimensions rather than as dichotomies. The relations between nations (and between persons and organizations) are then indicated in terms of positions in the six-dimensional value field. If the value dimensions of the present investigation can be translated into pattern value terms, a relation to Wright's conception of the value field is also indicated.

### 5. BEHAVIOR AND PATTERNS OF VALUE

In terms of the preceding discussion it appears that the value dimensions are related to phases (or dimensions) of action. It does not follow that they are equally represented in any particular action. In some cases, for example, the passage from impulse to consummation may be so direct that the perceptual and manipulatory phases of the act are at a minimum, and in other

15. *The Study of International Relations*, chaps. xxix, xxxii.

cases action may remain primarily at the stage of manipulation. The consequent types of action in which the various phases of action come to play a predominant and specialized part are the source of value patterns.

The Ways may be regarded as instances of such value patterns, differing in the importance assigned to dependence, dominance, and detachment and to the system taken as reference point. We have seen that preferences for certain Ways rather than others have no simple or single explanation. Some of the Ways are more congenial to certain types of physique and temperament than others; some of the Ways have special affinities with particular forms of character; some of the Ways make a wide appeal to persons who among themselves otherwise differ widely. At least in the great cultures the range of acceptance and rejection of these value patterns is very large.

In terms of the social system a similar situation is found; for the social roles which in their interrelations characterize the social system show great variations in the value dimensions that they stress. The ancient Indian caste system is an extreme instance of the consigning of certain values to persons in certain hereditary roles. Even when the social roles are not hereditary, variations are equally noticeable. The scholar and the judge are expected to preserve detachment, the soldier and statesman and businessman to be men of action, the minister and the nurse to be responsive. Thus certain phases of the total action necessary for the operation of the social system become delegated to the incumbents of certain roles.

Cultures, differing in the emphasis given to the value dimensions, likewise differ in emphasizing favored forms of action. The cultural value patterns which have here been studied were expressed, not in the uniform acceptance of a single Way, but in the relative weight accorded to the various Ways. Hence, because a Way is itself a value pattern, the cultural value pattern is a pattern of patterns.<sup>16</sup> In the United States and India samples, therefore, the profiles of the means of the Ways are more indicative of the two student groups than is the rating of

16. See in this respect the paper by Florence R. Kluckhohn, "Dominant and Substitute Profiles of Cultural Orientations," *Social Forces*, XXVIII (1950), 376-93.

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any single Way; for these profiles are quite stable throughout the area covered by each culture—indeed, variations in stability indicate variations in culture. Hence the “common values” distinctive of a culture are primarily the common acceptance of a certain distribution of values in various segments of the social system rather than the same operative values in all members of the culture. The nurse and the soldier in a culture cannot show the same operative values in their actions, but they can agree at the level of conceived values on the importance of the specialized values which each maintains within a single social system. In terms of the value dimensions this means that the values represented in Factor A must be widely accepted by members of a social system, but that the part played in the realization of the values represented in the other factors may differ widely from member to member and from institution to institution.

The varieties of human value are not mere vagaries. They have deep roots in the phases of action, in the persistent differences between persons, and in the division of work inherent in the total process of human action.

### 6. THE SEARCH FOR STRUCTURE

The strongest impression which this study has made upon its author is one of orderliness, of structure, in the domain of values. It is as if one discerns the contours of a region, though the recorded observations do not yet permit careful map-making. What underlying structure in the domain of values is suggested by the present observations?

Pertinent to the search for structure is a review of some results of the explorations made in the chapters on the biological, psychological, and social determinants of values.

The linkage of endomorphy and dependence, mesomorphy and dominance, and ectomorphy and detachment was noted in the biological system.<sup>17</sup> Such a linkage means essentially that organisms tend to value in accordance with their structural differences.

These constitutional differences were in turn found to be linked with variations in temperament.<sup>18</sup> In terms of the Thur-

17. See Table 57.

18. See Table 59.



stone temperament variables mesomorphy and ectomorphy were found to be sharply opposed, but no clear relation of endomorphy to those temperament variables was uncovered. And since factor analysis did not reveal three second-order factors, it cannot be claimed on the basis of these data that there is a simple correspondence between the three constitutional categories and three temperament categories. There is, however, some ground for believing that three of the value factors do show a correspondence with clusters of temperament traits. In terms of the value factors, the sharpest temperament opposition occurs between Factors B and C, with Factor D next in distinctiveness.<sup>19</sup> Because Factors B and C are related to mesomorphy and ectomorphy, and because Factor D seems, though less clearly, related to endomorphy, there appears to be a congruence between three constitutional traits, three patterns of temperament, and three of the value dimensions.<sup>20</sup>

At the level of character, as noted, the individual can take either himself or some other system as the point of reference, and there thus appears a wider range of character orientations. The discussion of Fromm suggested that each of the value dimensions has an analogue at the level of character.<sup>21</sup> That these differentiations can be conceived as falling within, and not as negations of, the more general categories of dependence, dominance, and detachment is suggested by the relation appearing to hold between Sheldon's three-dimensional analysis of psychoses, Horney's three-dimensional analysis of neuroses, and the three basic value categories of this study.

A similar situation apparently exists at the level of social systems. A consideration of the Parsons-Shils-Bales analysis of social action gave some evidence that detachment, dominance, and

19. See Table 40.

20. It is of course possible that further study will confirm Sheldon's view as to the existence of three basic temperament categories corresponding to the three somatotype components. The fact that Categories I, II, and III show a relation to Sheldon's temperament categories is some evidence in favor of this view.

21. No analogue to Factor C was found in Fromm's typology of character orientations, perhaps because he is primarily concerned with persons in social interaction.

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dependence are all involved in social action and that each of the differentiated value factors has an analogue expressible in terms of the pattern values of that analysis or in their combinations.

Possibly the Categories can be interpreted as specializations of categories within some general theory of systems, such as developed by L. von Bertalanffy or by others. Category I might be regarded as involving the permeability of the boundary of a subsystem within a system, Category II as the extension of the boundary of a system to incorporate other systems as subsystems, and Category III as the maintenance of the boundary of a system with respect to other systems. Or various philosophers might interpret Categories I, II, and III as specializations of philosophical categories. Thus the Hindu thinkers who applied the three *gunas* to all of nature (though not to all of reality) might maintain that I, II, and III are forms of the *gunas* within living processes. Alternatively, Charles Peirce's Firstness, Secondness, and Thirdness were regarded as categories of metaphysical rank, applicable to all reality, and perhaps Categories I, II, and III might be regarded as exemplifications of them in the sphere of preferential behavior.

At any rate, the applicability of the categories of dependence, dominance, and detachment in the study of biological, psychological, and social systems suggests that some value structure is common to all of them, though differing in form and complexity with the level and complexity of system organization.

A somewhat idealized form of what this structure appears to be when expressed in terms of Categories I, II, and III, the value factors, and the Ways is shown in Figure 6. Because this diagram is a two-dimensional representation of a more complex dimensional structure, it cannot present adequately the complexity of the relations involved. And since the sets of data upon which it is constructed (see Tables 3-6) do not agree in all details, the spatial positions given to the Ways are approximations. Nevertheless, read diagrammatically, it has a number of points of interest. The capital letters indicate factors, the numerals indicate the Ways, the outer curved lines

### Summary and Interpretation

indicate the regions covered by the Categories.<sup>22</sup> There is a marked (though not perfect) symmetry in the distribution of the Ways, and this is an indication that in so far as value space can be characterized in terms of these Categories and factors, the “Ways To Live” instrument is a good (“valid”) sample of the regions of this space.

The three large component sectors, covered by Categories I, II, and III, contain the Ways high in the Categories and also high on the factors into which the Categories differentiate with

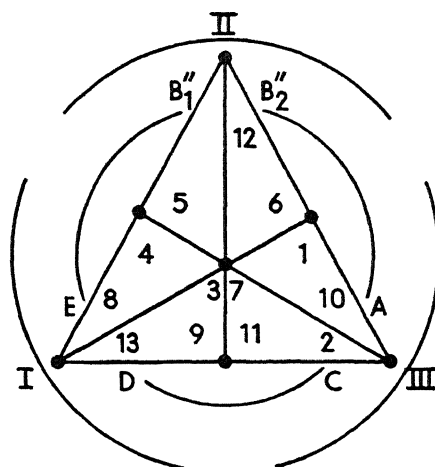


FIG. 6.—Idealized model of the structure of values

respect to actual systems. Each of the six sectors contains the Ways most distinctive of one of the six value factors, and these alternate in terms of the relative stress upon personality and social system. The phases of action might be regarded as movements through various sectors, the major movement probably being counterclockwise from sector A; the sectors traversed would vary to the degree to which an action was oriented to the self or to society.

In so far as constitutional variations, temperament and character traits, personality disturbances, aesthetic preferences,

22. The structure of the diagram matches the structure of a tulip, the dots on the triangle corresponding to the stamens, the center dot to the region of the pistils, and the curved lines to the petals.

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socially controlled behaviors, philosophies of life, and variations among cultures are related to the value categories and dimensions, they may be represented on this diagram and their relations made evident. The diagram thus presents a structure which integrates the main results of this study, whether these concern the biological, the personality, or the social system.

This diagrammatic version of the structure of the domain of values was constructed from the analysis of the Ways in terms of the three Categories and the factor loadings. A number of further checks of its approximate correctness are possible. The photograph facing page 148 is of the physical model derived from empirical data and described in chapter ii, section 7. Since the model was constructed on the basis of D's between the ratings of the Ways, and not in terms of either factor loadings or analysis of the Ways by judges in terms of the Categories, the structure which it exhibits is not the result of whatever theoretical assumptions enter from these two sources. Yet it is obvious that the structure revealed is very similar to the idealized structure given in the previous diagram.

That the structure shown in these diagrams does not result solely from the use of the "Ways To Live" document is suggested by two other considerations. The most important is the fact that a similar structure was indicated in the study of paintings. The second consideration comes from a calculation of D's between the ratings of religious source material.<sup>23</sup> A three-dimensional model constructed from these D's exhibited a noticeable similarity of structure to that shown in Figure 6. Since, however, the number of subjects used in the ratings was small, this result can only be regarded as suggestive. How far the value structure exhibited by the Ways holds for other content as well can be determined only by further research.

### 7. SCIENCE AND HUMAN ACTION

While the present investigation has been scientific in temper and intent, it has also been motivated by the humanistic concerns manifested in *Paths of Life* and *The Open Self*. In this respect it can be envisaged as an attempt to implement the

<sup>23</sup>. See chap. i, note 3, and chap. ii, note 17.

conviction of certain philosophers that a scientific study of values not only is possible but can advance the enterprise of the humanities.

Since the scientific study of values has been the burden of this book, there is no point in raising the general problem as to whether such a study is possible. More to the point would be the question as to how far such study can go. And the answer to this would surely be that no one knows in advance. One can only surmise that if such study is taken seriously to heart in the development of the behavioral sciences, it can in time go very far indeed.

Even if this be so, there is still the question as to the sense in which such scientific work can advance the enterprise of man as valuer. The issues here are complex, and this is not the place to attempt to resolve them. They depend in part upon the significations of the terms 'science' and 'evaluation', for as these vary the relations of science and evaluation are seen differently. The pragmatists (among other philosophers) have generally maintained that evaluations involve a predictive, or "cognitive," element, and the lesser studies here reported in terms of 'good' and 'ought' give some evidence of the truth of this position. To the extent that evaluations do involve prediction, they can be made and controlled in terms of scientific method. But to the extent that evaluations involve more than prediction, it is not easy in the present state of semiotic to state their relation to science.<sup>24</sup>

Whatever be the proper semiotical analysis of value terms, it is nevertheless certain that evaluations are an inherent feature of human action and that they are generally influenced by knowledge. Human action must favor some objects rather than others and some orientations to objects rather than others if life is to be maintained at the human level. And the objects and orientations favored vary to some degree as more is known

24. I have done something with such topics in *Signs, Language, and Behavior* and in the two volumes *Value: A Cooperative Inquiry* and *The Language of Value*. A penetrating analysis of the present situation in philosophy with respect to the nature of value terms is found in Philip Blair Rice's *On the Knowledge of Good and Evil*. Genuine progress will require an isolation of the dimensions of signification by objective methods.

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about them. Science is thus an extremely important means by which evaluations may be made more responsible with respect to the actions in which they occur. That this is the case in evaluations about foods, medical practices, engineering techniques, and legal enactments is not doubted. There is no reason to suppose that increase in the knowledge about values will be without effect upon the evaluations involved in man's ethical, artistic, philosophic, and religious activities.

Science, however, is only one phase of human action. While it may minister to other forms of activity by giving them the knowledge relevant to the accomplishment of their own purposes, science cannot replace these other activities or accomplish their purposes. The mansion of human values is large, and it is built and sustained and changed only through the diversified activities of many men.

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